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The importance of Russia's agricultural sector in the MENA geopolitics

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Abstract. *After 1990, at the close of the communist era, Russia's agriculture embraced an ample process of transformation. The transition from centralized agriculture to a modern, competitive and sustainable agriculture was marked by several reform failures. Nonetheless, the Eurasian country's agro-food sector and in particular the grain industry thrived remarkably after 2014 in the wake of the Western countries-imposed sanctions on Russia in response to Moscow's annexation of Crimea. In fact, Russia's policymakers recognized Kremlin's decision to impose complete food imports ban on the EU, US and some other Western countries as an opportunity to re-launch the agro-food sector. At present, the government seizes the sector's economic potential also as a strategy for economic diversification of the country, which is too much tied up to the oil and gas industry performances. In fact, in the Putin era the establishment of integrated agricultural holdings was supported by well-balanced agricultural reforms that had an important role for the modernization of Russia's grain industry. In this regard, the main purpose of this paper is to analyse the agro-food policies developed by the Russian government, the reasons behind the success of Russia's grain industry in the Middle East and North Africa regions (the so-called MENA countries) and the weaknesses it still confronts, both internal and external.*

KEYWORDS: MENA countries, Russia

Introduction

The economic relevance of the agro-food¹ sector is increasing worldwide. For example, within the economies of the European Union Member States (EU and MS respectively), the agro-food sector has a great socio-economic relevance: more than 500 million of EU citizens enjoy one of the highest quality food supplies at affordable prices. The agro-food sector represents roughly 44 million of jobs (4.0% of EU Gross Domestic Product - GDP). In 2020 EU agro-food trade (exports plus imports) reached a value of €253.7 billion (i.e. 0.3% more than in 2019). EU27 exports increased by 0.5% compared to 2019, reaching €151.8 billion. EU27 imports attained €102 billion, just 0.1% higher than 2019 (EU Commission, 2020). Surprisingly, agriculture has a poor relevance within the political agenda of several nations. This is mostly observed when policymakers are required to establish a strategy or a security system as both are considered military concerns. In many countries the only area where agriculture is closely linked to security is that of "food security": a sector which is independent from the national defence system (Bassou, 2016).

Few countries (among these the USA) have clearly identified the agro-food sector as a key area in terms of national security. For example, in 2016 when the Chinese giant *ChemChina* proposed to buy the agro-chemical manufacturer Syngenta (\$43 billion in cash: the biggest acquisition abroad ever done by a Chinese group), the USA senators asked the Treasury Department to analyse the Chinese proposal against "potential consequences for the USA national security agro-food sector" (Bassou, 2016). In the last twenty years, USA's

¹ Agrifood sector shall be intended as the set of different stages in the agricultural production of food: from production to processing, trading, distribution, and consumption. Literally "from field to fork". This set also includes the grain sector.

defence doctrine, stability and world-governance are dependent on food security; thus, the USA's agro-food sector issues are closely related to domestic and foreign policies.

Russia's agro-food system and in particular its grain industry, after re-emerging from the significant setback triggered by the disintegration of the Soviet Union (hereinafter USSR) in 1991, plays an important role within the national economy accounting for 4% of the national GDP. It is also one of the largest sources of employment in the country (10% of the working population is employed in this sector). It is a strategy that challenges the standpoint of many experts who associate Russia's geo-economic power merely with the arms and oil/gas sectors' performance. Currently, the Eurasian country retains the title of the world's largest wheat exporter. Needless to say, its trade relations have great influence on several strategic areas. For instance, Russia's economic relationships with the Middle East and North Africa regions (MENA countries²: mainly Egypt, Turkey³, Libya and Syria) depend on the Russian wheat production as well. This study aims to evaluating the impact of the agro-food policies on Russia's international relationships and thus their influence within this fluid geopolitical context.

The paper is organized as follows: Section 2 describes the institutional background of Russia, and it provides also an overview of the Eurasian country's foreign policies. Section 3 describes the main economic issues of the Russian Federation. Section 4 provides an overview of Russia's (officially The Russian Federation) agro-food policies evolution with a special insight into the food policies adopted in the Communist era. Section 5 reports an analytical insight into the evolution of Russia's diplomatic influence in the Middle-East. Section 6 will analyse the main aspects of Moscow's growing relevance as key player in the grain markets of the MENA region. Section 7 concludes with caveats as regards the author's interpretations.

Russia institutional context and political environment

A strong executive

Understanding Russia's key domestic issues is valuable for the analysis of its geopolitical approach in the agro-food international context. Domestic politics influences the geopolitics processes and their outcomes; thus the importance to explore the dominant changes and trends of Russia's political environment in the last 30 years.

The economic results of the main economic sectors, including the agro-food sector, were notably affected by Russia's governmental political decisions and strategies. After the "Yeltsin period" (July 1991-December 1999), President Putin gradually concentrated the power in the presidency. He consolidated the political authority's vertical line by reorganizing the federal and regional governments (Oliker et al., 2009). Since the early 2000s an important component of Kremlin's ideology was the "sovereign democracy"⁴, which encompasses mainly the following principles: (a) the sovereignty of Russia above

²The Middle East was a Eurocentric term forged sometime during the 19th century referring to a trans-continental area between North Africa (Egypt) and South West Asia. International organizations such as the World Bank and UNICEF use more specific terms such as MENA to refer to the region spanning horizontally from Morocco to Iran.

³Depending on the definition, Turkey is considered either part of MENA or just outside of MENA (geographically). However, for the purposes of this report it is helpful to include Turkey in all the discussions regarding MENA.

⁴For Surkov, sovereign democracy is: "A society's political life where the political powers and decisions are decided by a diverse Russian nation for the purpose of reaching material welfare, freedom and fairness by all citizens, social groups and nationalities, by the people that formed it".

all; and (b) material well-being. This process reduced the checks and balances within the Russian political system; furthermore, several changes within the parliament and the judiciary and regional governments shaped Moscow's decision-process as highly centralized (Frolov et al., 2006).

Russian regional government and legislative power structure

From the mid-1980s until 1991⁵ there were several changes in the structure of the Soviet Federal States, whereas: (a) in 1998 a Soviet Congress of People's Deputies was established in each republic; (b) for the first time elections to these bodies presented voters with a choice of candidates including non-communists representatives. Several events brought to the establishment of the Russian Federation: (a) in June 1990 the Russian Congress proclaimed the supremacy of Russia's law over the USSR laws; (b) in June 1991 Yeltsin became the first president democratically elected; (c) in August 1991 an abortive coup by hard-liners opposing Gorbachev's reforms led to the collapse of the USSR governmental organizations and the abolition of the Communist Party's leading role in the government⁶. Russia's administrative structure differed significantly from the USSR. The tensions between the executive and legislative powers became dramatic in 1993 when President Yeltsin dissolved the Russian Parliament. Since then, there was a strengthening of presidential powers with many legislative acts supporting this decision (Table 1).

Table 1 - Russia's main constitutional changes

Period	Constitutional changes
President Yeltsin (10 July 1991-31 December 1999)	December 12, 1993, 3/5 of Russian voters ratified the new constitution proposed by Yeltsin, and representatives were elected to a new legislature. The president shall be elected in a national vote and cannot serve more than two terms consecutively. The president is vested with significant powers. The president is also commander in chief of the armed forces and can declare martial law or a state of emergency. The president (whether the legislature fails to pass the president's legislative initiatives) may issue decrees that have the force of law.
President Medvedev 7 May 2008-7 May 2012	Extension of the presidential term from 4 to 6 years (2008). With the enactment of the new constitution the Federal Assembly ⁷ became the country's legislative body. The president's nominee of the prime minister is subject to the approval by the State Duma. The president has the (pivotal) power of dissolving the State Duma and call for new elections if the Duma rejects a nominee three times or passes a vote of no confidence twice in three months. All legislation must first pass the State Duma before considered by the Federation Council; Presidential veto can be overridden by the legislature with a 2/3 majority, or a bill may be altered to incorporate presidential reservations and pass with a majority of vote. With a 2/3 majority (and approval by the Russian Constitutional Court), the legislature may remove the president for treason or other serious criminal offenses.
President Putin 7 May 2018 - to date	On 15 January President Putin announced plans to overhaul the Constitution. The most important change was added by a surprise last-minute amendment, which stated that Putin's previous presidencies should not count towards the two-term limit, thus opening the door to his remaining in power for 12 more years after his fourth presidency ends in 2024. Apart from this, the amendments revising 42 of 137 articles, fall into four main groups, concerning: (a) the role of Russia's political institutions; (b) Russian sovereignty; (c) socio-economic benefits, (d) values. Putin's January 2020 speech already contained an outline of the main proposals in the first three groups, but the amendments on values were all abided subsequently by the State Duma.

President Putin created seven districts above the regional level to increase the central governmental power over the Region. Furthermore, Moscow's strategy on the problems with separatism and Islamic militancy in the Caucasus region brought to the establishment of eight-federal districts in 2010. The Constitution, reporting legal

⁵The period of Mikhail Gorbachev's *perestroika* (restructuring), *glasnost* (openness) and *demokratizatsiya* (democratization) reform policies.

⁶Republic after republic declared its sovereignty; in December, when the USSR was formally dissolved, Russia was established as an independent country.

⁷The Federal Assembly consists of: (a) the Federation Council (an upper house comprising appointed representatives from each of Russia's administrative divisions); (b) the State Duma (a 450-members popularly elected lower house).

provisions that guide the Sub-National governments (SONGs), guarantees the principle of self-government. “Federal Law⁸” also stated legal relationships among the central and peripheral government. Although the central government retained significantly its authority, peripheral government bodies attained some powers: (a) regions may adopt their legislation on local self-government if agreeable with federal legislation; (b) local authorities may carry out public services of local interest⁹. The Russian Federation is divided in 83 regions with various degrees of autonomy. Figure 1 shows the main outlines of territorial organization/sub-national government responsibilities.

Figure 1 – Territorial organization and sub-national government responsibilities



Source: OECD, 2016.

The establishment of the controversial 9th district in 2014 following the annexation of the Ukrainian autonomous Republic of Crimea was a significant and strategic geopolitical move for Russia whereas:

1. Under past agreements Ukraine allowed Russia to keep its ships in Crimea (after the fall of the USSR), but preventing additional Russian vessels from being added. This changed after the Maidan protest¹⁰ movement in Kiev. As a pro-Western government formed in Ukraine the Kremlin was no longer sure that the agreements on Crimea would be honoured. The fleet's capabilities changed profoundly after the annexation. Moscow diverted resources to renovating the fleet, and Sevastopol is now a major hub of Russia's military and geo-economic power projection.
2. With the control on Crimea Russia acquired a dominant position across the Black Sea region. With Crimea's central position in the Black Sea the Russian navy can control from Sevastopol all the approaches and dominate the region vis-a-vis Turkey¹¹ (Kingwell, 2016).

⁸ The 2003 Federal Law 131-FZ on the General Principles of Local Self-Government determines the main areas falling within the jurisdiction of the Federation, the regions (regional transport) and shared competences (minority rights, environment, health, education, science, culture, labour law, social security, family law, and natural disasters).

⁹The public services of local interest can be listed as follows: education, public health, public order and safety, land use planning, social protection-employment, local economic-development, environmental protection, public utilities (local energy, waste), local roads and public transport.

¹⁰A wave of demonstrations in Ukraine, which began on the night of 21 November 2013 with protests in Maidan Square in Kiev, were sparked by the Ukrainian government's decision to suspend the signing of an association agreement with the European Union instead of choosing to hold closer ties to Russia and the Eurasian Economic Union. The protests' scope soon widened, calling for the resignation of President Viktor Yanukovich and his government. The protests were fuelled by the perception of "widespread government corruption", "abuse of power", and "violation of human rights" in Ukraine. The situation escalated after the violent dispersal of protesters on 30 November leading to many more protesters joining. The protests led to the 2014 Ukrainian revolution.

¹¹This approach was enshrined in the latest draft of Russia's national naval doctrine released in July 2015. The document envisions a reinvigorated presence in the Black Sea, allowing Russian ships to reestablish lost footholds in the southern Atlantic, the Mediterranean Sea, and through the Suez Canal. In the document, Russia says its aim is to wield influence abroad and resist NATO encroachment.

3. Sevastopol acts currently as a forwarding operating base supported in the background by Novorossiysk (Figure 2). Transport ships from the Black Sea Fleet are still used to deliver goods from Novorossiysk to the Russian naval facility in Tartus on the Syrian Coast crossing through the Bosphorus Strait. This route is a vital line of supply for Russia's military operation in Syria (Figure 2).

Figure 2 - The strategic position of Sevastopol as commercial conjunction allowing transport goods from continental Russia through the Black sea towards the Mediterranean Sea (Europe and MENA Countries)



Note: The blue line indicates the transport route of agro-food and industrial commodities from Russia through the Black Sea to the Mediterranean Sea.

4. The Sevastopol port has also a strategic commercial relevance for Russia. Moscow's agro-food companies can transport considerable amount of goods (including wheat and other cereals) towards the MENA countries; in February 2019, a trade agreement was signed between the Sevastopol Port Authority and the Syrian Port Authority of the Tartus harbor. The agreement dealt with transshipment of several goods such as food, grains, building materials, etc., through the ports of Tartus and Sevastopol. This Crimea's territorial claim was not recognized by Ukraine and most other countries; nevertheless, Russia exercises *de facto* control of the region.

Russian multifaceted foreign relations

Most powerful countries' foreign policies make complementary use of political, economic, military, and cultural cooperation tools and conduct diplomacy that thinks globally and acts in almost every corner of the world. The current Russian foreign policies are not an exception. The Eurasian country's foreign policy in the early years of the post-Soviet era has been largely influenced by the pro-Western representatives and by their close diplomatic relationship with NATO and the EU. However, due to several diplomatic fallouts the cooperation between the Russian Federation and most Western institutions froze significantly. Since the establishment of the country Russia's foreign policies can be divided into two main periods, which are described below:

1. Pro-Western foreign policies. Since 1991 Russia's foreign policies were influenced by pro-Western representatives and its diplomatic relationship with NATO. Pro-Western representatives wished to integrate Russia's economic system with the Western countries'

economies. The first president of the new-born Russian Federation Boris Yeltsin stated that “NATO membership could have been a long-term political aim of Russia”. Thus, after the USSR’s collapse, the foreign policies aimed to ensure “democratization” of the newly formed post-communist countries and guarantee a stable Europe (Roache, 2019). In 1994, Russia signed an official agreement with NATO, offering its collaboration at building trust between NATO and other former Soviet countries. However, problems started with NATO's request for Russia to uphold democracy and human rights (McFaul, 1999). The relationship became even more problematic after NATO refused a Moscow's request (Roache, 2019). By 1999, when it became clear that NATO and Russia had irreconcilable views over the future of the post-Soviet Republics, this potential alliance turned into a security challenge (Garcevic, 2017).

2. New approach of Russia’s foreign policies. Since 2008, the conflicting relationship between Russia and Western international institutions (namely NATO and the EU Commission) is marking a continuous increase: (a) in April 2008, NATO promised membership¹² to Georgia and Ukraine at the Bucharest summit, but a membership plan was not offered; (b) in August 2008 Russia started a five day invasion to defend the breakaway regions of South Ossetia and Abkhazia (Figure 3); (c) South Ossetia and Abkhazia later declared their independence and Russia is one of the few countries in the world to recognize it; (d) in March 2014 Russia sent troops to annex Crimea from Ukraine. This military action started on February 2014 and ended on March 6 with the declaration of Crimea’s independence. Since the pro-Russian government was established in Crimea, the south-east part of Ukraine remains an unsafe conflict zone (Roache, 2019).

Figure 3– Map of Russo-Georgian War



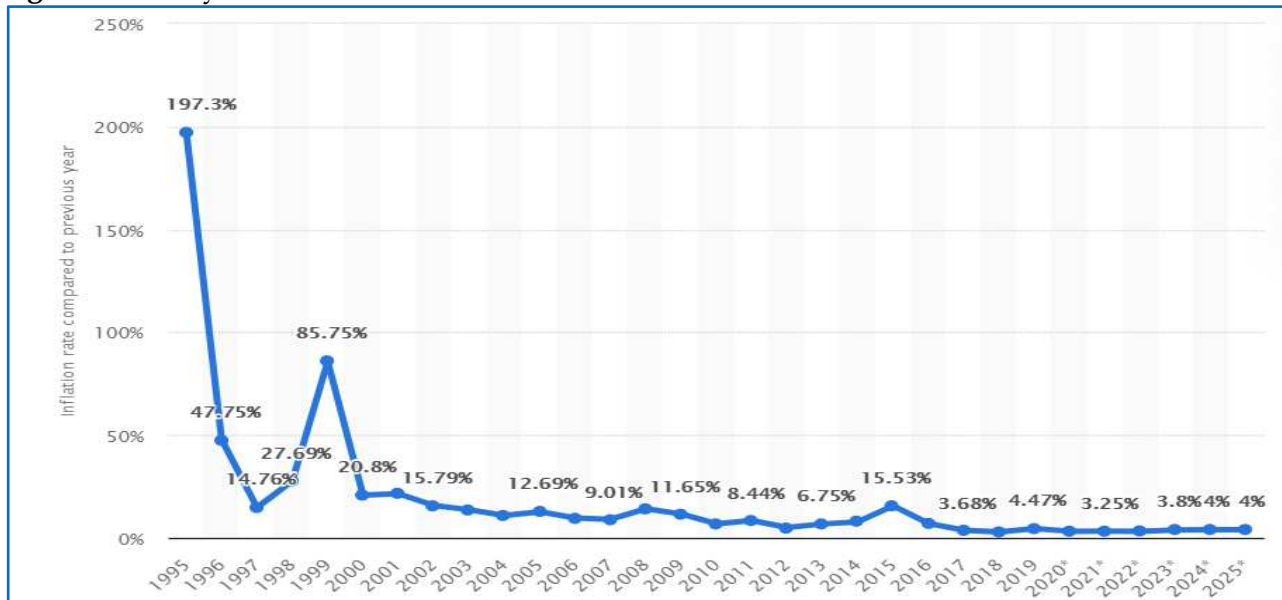
Source: Wikimedia Foundation

After Crimea’s conquest, Western nations imposed severe economic sanctions on Russia. Thus, Moscow engaged in trade retaliation introducing (on 7th August 2014) a specific import ban on a range of product categories (beef, dairy products, fruits and

¹² More information on this topic: Brunnstrom D., Cornwell S., *NATO promises Ukraine, Georgia entry one day* on Reuters official website (<https://www.reuters.com/article/us-nato/nato-promises-ukraine-georgia-entry-one-day-idUSL0179714620080403>).

vegetables) originating from USA, EU, Canada, and Australia. Of Russia's US\$39 billion worth of agro-food imports during 2013, US\$23.5 billion were in the product categories affected by this ban (FAO, 2014). The import bans fueled food prices reducing food availability, as demonstrated by the inflation rise since 2014 (Figure 4) (Liefert and Liefert, 2015).

Figure 4 - Yearly inflation in Russia since 1995



Source: Statista, 2019. Note: The statistic shows the inflation rate in Russia 2004-2018, with projections up until 2024.

An example of Russia's "multifaceted" foreign relation, which also regards the interface between geopolitics and agriculture, is that with Turkey. In November 2015 Turkey shot down a Russian warplane on its border with Syria, which opened a severe diplomatic crisis between the two countries. With a president Putin's decree of November 2015, Russia banned Turkish agricultural imports and hiring Turkish nationals; the ban lasted almost one year starting from 1st January 2016 to the beginning of 2017 (Kingwell et al., 2016). However, after a quick recovery of the bilateral relations, both countries rapidly increased military¹³ and economic cooperation. These issues show that the Russian government is prepared to exercise its powers in many ways that affect its economy, including the agro-industry. Often the interests of any sector, including the grains industry, are subservient to the emphasis that the Russian government places on geopolitics and food security. Indeed, market forces alone are not the main determinant of changes in Russia. Rather it is the policy decisions of the Russian government that can leave short and long term imprints on the regional growth and the profitability of various sectors, including the grains sector (Kingwell et al., 2016).

¹³More information regarding the reshaped bilateral relationships between the Russian Federation and Turkey also in the military sector and business can be found on the following websites: (a) <https://www.reuters.com/article/us-turkey-security/russia-delivers-more-air-defense-equipment-to-turkey-idUSKCN1U806B>; (b) <https://sputniknews.com/military/201908281076659541-erdogan-interested-in-russia-mig-35-fighter-apart-from-su-35-su-57/>

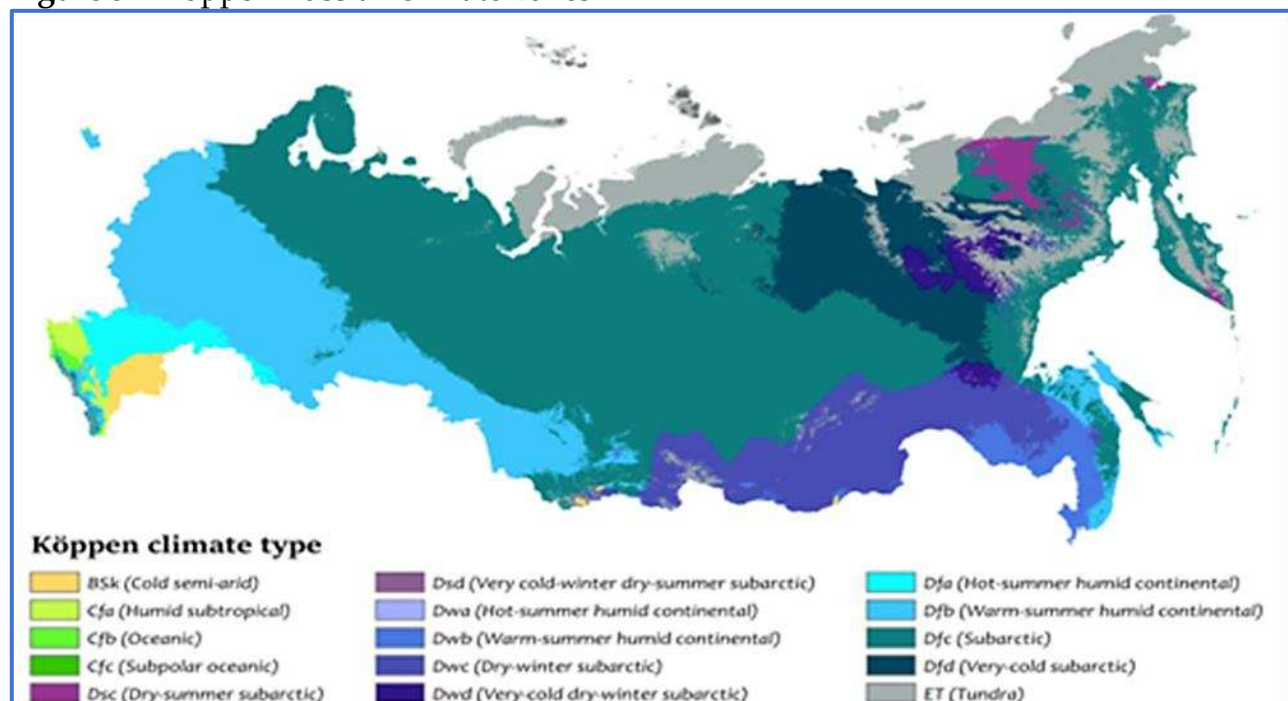
An overview of Russian main economic aspects

The relevance of geography on the Russian economy

A stable macroeconomic and political environment is a key element to foster a balanced economic and financial system, as it is easier for economic agents to assess the risks and returns associated with financial activities. If the political and financial-economic volatility are excessively high, financial markets and foreign investors are unlikely to provide long-finance at a reasonable premium, as well as economic support to carry out entrepreneurial investments (World Bank, 2015). The Russian Federation was not an exception. Its institutional and financial-economic context was characterized by a high degree of volatility and uncertainty considering that the government implemented radical reforms aiming to transform a vast central planned economy to an economy based on capitalist principles. Certainly, this quick shift led to an unstable trend of the Russian economic sectors, including the agro-food sector.

The analysis of Russia's geopolitics and agro-food policies must consider the country's size. Wideness has always been both an advantage and a disadvantage for the development of the Russian policies at all levels (Bezrukov and Sushentsov, 2015). While covering the largest land mass on earth can be an advantage in terms of potential areas of influence that can come under Russian control, the country's socio-economic context has always been affected by: (a) huge distances between cities worsened by a lack of communication lines (due to insufficient investments in infrastructures); (b) the absence of natural barriers against enemies; (c) harsh climate in many areas, which affects also the socio-economic conditions of the populations living in those areas. These issues may affect the government's action in terms of proper delivery of essential services (energy supply, equal level of education, healthcare's standards, and security in all areas). Russia's complex socio-economic context was smoothly depicted by Vladimir Solovyov (2015), who stated that "geography is the stepmother of the Russian history". Figure 5 (which includes Russian climate zones) shows how truthful is this statement.

Figure 5 – Köppen Russian climate zones



Source: Climate zones calculated from data WorldClim.org

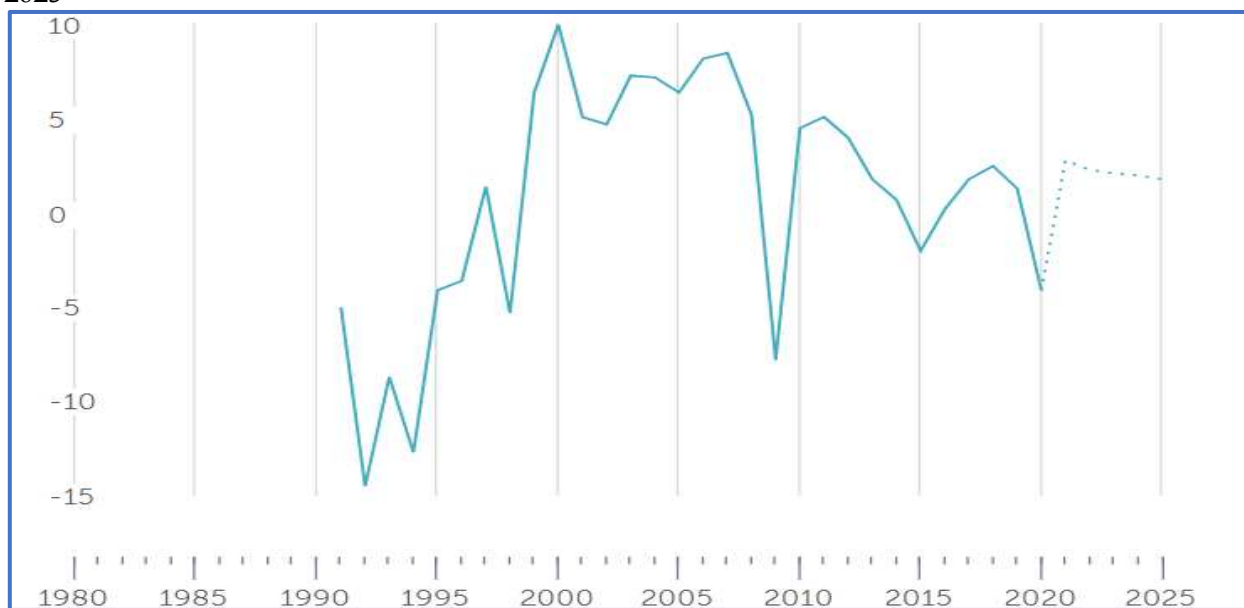
Being the largest country in the world also implies several advantages. Indeed, Russia is one of the richest countries in terms of natural resources. From Kaliningrad to Vladivostok (total distance of 10,317 km) the country holds a huge amount of different raw materials (oil, gas, timber, copper, diamonds, zinc, bauxite, nickel, uranium). Within such a vast quantity of strategic economic assets, agro-food commodities also play an important role.

Economic outline of Russian Federation

Since the establishment of the Russian Federation as an independent political and juridical entity in 1991, the country's economic performances showed a fluctuating trend, summarized as follows:

- 1. Transition period.** The first decade of transition from centrally planned economy to market economy was hard-hitting for Russia. GDP fell from \$516 billion in 1990 to \$196 billion in 1999: a significant plunge of over 60%. To tackle the economic turmoil (following the IMF recommendations) the government privatized many Russian industries during the 1990s (except for the energy and defence sectors).
- 2. Financial crises.** The devaluation in 1998 (after the financial crisis) and the uninterrupted upward trend of oil prices from 1999 to 2008 propelled the Russian economy (based on its energy sector exports) to grow at an annual average rate of 7% (Figure 6) (Frigoli, 2009).

Figure 6 - Russia: Real GDP, annual percentage change, 1990-2018 and IMF forecast for 2021-2025



Source: IMF World Economic Outlook database, October 2019.

The 2008-2009 global financial crisis plunged Russia's economy of 7.8% in 2009 as oil prices plummeted and foreign credit dried up (Figure 6) (Moiseev et al., 2019). However, the government and the Central Bank timely responded to ring fence key economic sectors (such as the banking sector) from the effects of the crisis. Russian economy began to grow again and increased of 4.5%, 4.3% and 3.4% in 2010, 2011, and 2012. Thus, the country paid

back in advance the debts taken out with the Paris Club¹⁴, and accumulated large reserves in currency before slowing down to 1.3% in 2013 and 0.6% in 2014 (Frigoli, 2009 and Focus Economics, 2020). Indeed, the Russian economy in 2014 experienced two major shocks with a modest growth of 0.6% (Figure 6) due to: (a) the sharp decline in oil prices during the third and fourth quarter of 2014, which exposed Russia's extreme dependence on global commodity cycles¹⁵; (b) the double combination of a nearly 75% drop in the price of oil and Western sanctions imposed in 2014 (after the Ukrainian dramatic events). Both caused a strong economic recession. The collapse of the "rouble" and the inflation's soaring forced the government to dig deep into its international reserves to keep the banking sector afloat (Russel, 2019). Partly helped by a recovery in the oil price, the economy started growing moderately again in late 2016.

3. Slow recovery. Both years 2017 and 2018 displayed a limited GDP growth. In 2019, the Russian GDP was just 1.3% year-on-year, which is well below even the most cautious forecast (Figure 6). The boost that this growth is supposed to obtain from the RUB 25.7 trillion (\$417bn) investments (planned for 13 national projects) is still at least two years away and the administration is still arguing over the amount to be allocated on each project. The positive effects of this spending were expected to increase the GDP growth to over 3% by 2021. Many economists remain skeptical about the possibility to achieve this goal, as confirmed by Figure 6 data. In January, the new Russian Prime Minister Mikhail Mishustin promised again to speed up the fulfilment of the above-mentioned national goals, whose details are reported in the following box 1.

Box 1. Russia: list of upcoming projects

In January 2020 during a session of the State Duma (the lower house of Parliament), the new Russian Prime Minister Mishustin highlighted the importance of implementing the program regarding the above-mentioned 13 key national projects (in 13 key different areas) to spur the stalled economic growth and make Russia the fifth biggest economy in the world by 2024. The Russian Prime Minister underlined that spending on these target areas will amount to approximately 25.7 trillion roubles (\$417 billion) and involve private as well as state funds according to governmental plans. Below are listed some of the key targets for each national project:

1. Healthcare. Costs: 1.73 trillion roubles for providing medical care to all Russians and raising the average life expectancy of Russians to 78 by 2024 from 71.6 now.

2. Education. Costs: 785 billion roubles for reshaping the Russian education system into a globally competitive system, with an ambitious goal to enter the world's top 10 in terms of quality and double the number of applicants from abroad by offering attractive higher education options for foreigners.

3. Demography. Costs: 3.11 billion of roubles for increasing the birth rate to 1.7 children per woman from 1.62 by 2024, and providing financial support to improve the family well-being including preferential mortgage rates at 6% and free courses for women on maternity leave.

4. Culture. Costs: 114 billion roubles for increasing visits to cultural institutions by 15%, including theatres and libraries and raising the number of people with access to digital cultural resources, such as online streaming of events.

5. Safe and quality roads. Costs: 4.78 trillion roubles for reducing the vehicle fatality rate by one third by 2024 through investment in road infrastructure and smart traffic control systems.

¹⁴Informal group of official creditors whose role is to find sustainable solutions to the payment difficulties experienced by debtor countries. As debtor countries undertake reforms to stabilize their macroeconomic and financial situation, Paris Club provides an appropriate debt treatment.

¹⁵After fluctuating within a tight band near \$105 per barrel from 2011-2013, crude oil prices ended 2014 at less than \$60 per barrel.

6. Housing and urban environment. Costs: 1.07 trillion roubles for providing affordable housing to middle-income families, including mortgage loans of less than 85, and for building 53 million square meters of residential buildings each year by 2024.

7. Ecology. Costs: 4.04 trillion roubles for creating new national parks with an area of three millions of hectares.

8. Science. Costs: 636 billion roubles for becoming one of the top five countries in the world praised for scientific research and development excellence, which should mark a jump from the 11th place in 2019, and offering attractive working conditions and environment to foreign scientists, with 30% of all new laboratories to be led by young researchers.

9. Small and medium-sized enterprises (SMEs). Costs: 482 billion roubles for having 25 million people employed in SMEs or working as individual entrepreneurs by 2024 and increasing the share of SMEs as a percentage of GDP to 32.5 by 2024 from 22.9 in 2019.

10. Digital economy. Costs: 1.63 trillion roubles for providing internet access to everyone, up from 45.2% in 2019, and covering the largest Russian cities with 5G.

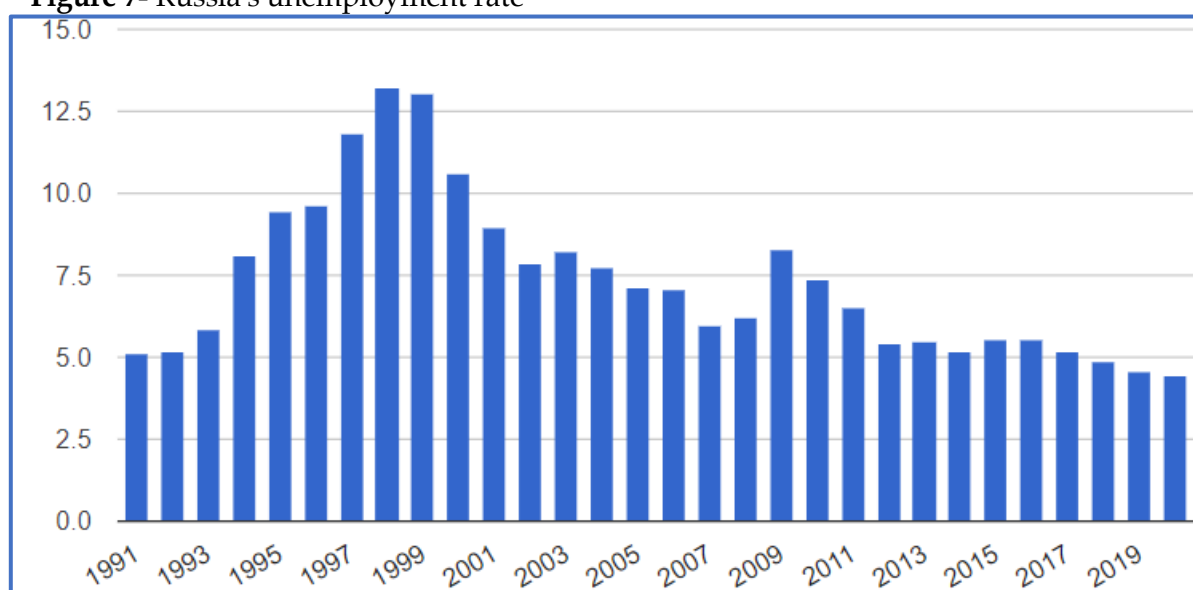
11. Productivity and employment support. Costs: 52 billion roubles for increasing labour productivity by 5% per year for medium and large companies.

12. International cooperation and exports. Costs: 957 billion roubles for increasing the export of goods beyond the energy and raw material sectors to \$250 billion by 2024 from \$160 billion in 2019 and for increasing the share of exports in manufacturing, agricultural products, and services to 20% of GDP by 2024.

13. Modernization of infrastructures. Costs: 6.35 trillion roubles for modernizing key travel infrastructure, including air travel, railways, roads, sea, and river infrastructure, in an effort to improve the economic connection across the country.

4. Improvement of socio-economic indicators. The data on inflation (from 2015 to 2019), budget deficit and poverty rate reveal that the government's economic policies have been quite effective. Inflation dropped from 12.9% in 2015 to 2.8% in 2019 and the federal budget decreased from 3.4% in 2016 to 1.5% in 2019. After a significant drop since the early 2000s, the poverty rate is currently stable at around 13%. Government policies to lower the unemployment rate have also been successful. For that indicator, the World Bank provides data for Russia from 1991 to 2020. The average value for Russia during that period was 7.3% with a minimum of 4.43% in 2019 and a maximum of 13.3% in 1998 (Figure 7).

Figure 7- Russia's unemployment rate



Source: theglobeconomy.com (2021).

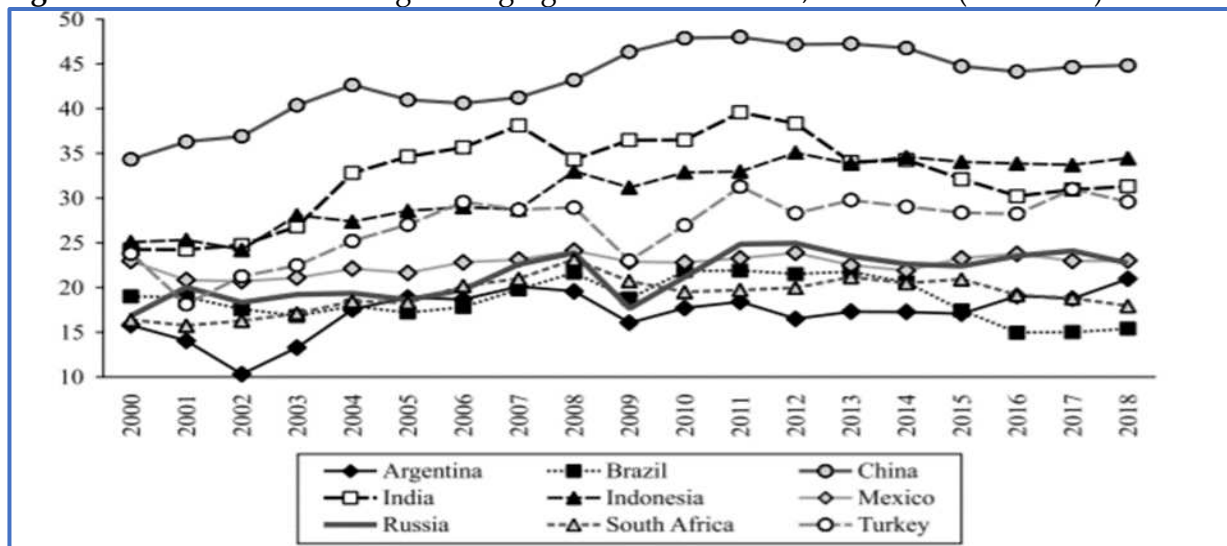
Agriculture played a key role among the economic sectors that allowed for a moderate growth of the Russian economy since 2016. This sector produces around 3.7% of the country's GDP, employs 9.2 % of the national workforce and contributes around 6% to the country's exports. The sector has shown remarkable resilience in the face of wider economic turbulence, and self-sufficiency rates for the main agricultural commodities are relatively high (Kuzminov et al., 2018).

During the last 15 years, Russian economy showed ability to recover from difficult periods within some limits. The government's policies improved the country's public finances and the economic activities in a context of deteriorated international relationships with many Western nations. However, several analysts argue that a long-term sustainable growth is possible only if the following main socio-economic issues are solved:

1. Demographic trend. In the next 40 years, the working-age population will shrink by approximately 25 million, that is, by one quarter. For the Russian economy, this adverse demographic trend is having two major consequences: (a) reduction of the labour supply; and (b) population aging. Population aging has a negative impact on the fiscal sustainability of the public pension, healthcare, and long-term care systems by increasing the old-age dependency ratio. It might also contribute to slower total factor productivity (hereinafter TFP) growth as young employees are more dynamic and open to innovation.

2. Capital Investment. Its level, which well exceeds 20%, places Russia in the middle of the large emerging market economies (EMEs) group (Fig. 8). It is lower than in China, India, and Indonesia, but higher compared to Argentina, Brazil, and South Africa, and similar to Mexico. Again, given that Russia represents the highest GDP per capita level (in PPP terms) in the analysed group, its recent total investment rate does not seem to be too low to generate higher growth rate. In other words, it is not the low volume of investment that is harming Russia's economic growth, but rather its low effectiveness. Interestingly, the rate of gross national saving in Russia exceeds systematically the rate of investment, generating permanent current account surplus. This is partly a result of the presence of substantial oil and gas rent, but it may also suggest a shortage of attractive investment opportunities due to the poor business and investment climate (Dabrowski, 2019). So, given the current situation Russia's economy will continue to grow at less than 2% (Aris, 2019).

Fig. 8 - Total investment in large emerging-market economies, 2000–2018 (% of GDP)



Source: IMF World Economic Outlook database, October 2019.

3. Productivity. The deficit of labour resources could be at least partly compensated by an increase in TFP. According to Voskoboynikov (2017), TFP and the effectiveness of labour allocation in the Russian economy have deteriorated since the mid-2000s. Growth in labour productivity was relatively fast in the early and mid-2000s when the Russian economy partly benefited from post-transformation reallocation of already existing production factors but then substantially decelerated to below 2% annually (Rosstat, 2019). In 2009 and 2015–2016, which are the years of recession, labour productivity declined (Dabrowski, 2019).

As regards 2020, the latest World Bank analysis forecast a contraction of the Eurasian country's economy. Russia started this year with an official forecast for 1.9% growth. But the double combination of an oil price shock because of OPEC production cut deal (on March 6) closely followed by an escalating corona virus (COVID-19) pandemic that has brought the global economy to a standstill will hurt the Russian economy (see box n. 2).

Box 2. Russian economy in the COVID-19 era: some facts

Russian economy has been hit hard by the COVID shutdown of the economy and the collapse in crude oil prices; indeed, the country's GDP contracted by almost 4.0% in 2020, and services have been significantly affected amid abrupt changes in consumer behavior and a fall in disposable income. At the same time, the outsized role of the public sector cushioned the negative impact on employment. The macroeconomic framework, centered on a flexible exchange rate, also served the economy well. Furthermore, currency depreciation led to strong import compression and supported budget revenues, but did not limit monetary policy space much, given a low pass-through of goods prices and downward inflationary pressures from services (EU Commission, 2020). Whereas, gradually, thanks to the vaccination campaign (by using the "Sputnik" vaccine) the Russian government is trying to speed up the achievement of the so-called "herd immunity", and the situation regarding the spread of COVID-19 is improving in several cities, the majors started to lift restrictions. For example, on January 27th the Moscow's major decided to lift restrictions on the night-time (from 11pm to 6am) work of catering enterprises, nightclubs, bars, as well as other entertainment establishments. Thus, given the underlying assumption that further lockdowns are avoided, consumer and business confidence are expected to improve in 2021. This would pave the way for a gradual GDP rebound at about 2.8% in 2021, and 3.0% in 2022 (World Bank, 2020). As uncertainty diminishes, household consumption is expected to lead the recovery, and investment. However, even with positive GDP growth ahead, GDP levels in 2022 will barely catch up to pre-pandemic levels. The general government budget is expected to turn to deficit in 2021-22. Although, the official unemployment rate remains relatively low insecurity in the formal sector, the return of migrant workers to their home countries and downward wage pressure weigh on consumption. Investment is set to remain depressed for the remainder of this year and to grow only slowly in 2021 and beyond, as the investment climate remains negative and many SMEs lack access to finance. At the same time, the uncertain outlook for the oil sector is expected to dampen investment in the energy sector (World Bank, 2020). Notwithstanding the Prime Minister intention to accelerate the implementation of the national infrastructures, after a strong start in 2020, driven by the rollout of national infrastructure projects, public investment stalled as the authorities reprioritised resources toward public consumption. Public consumption is expected to remain elevated while public investment is not projected to regain traction over the forecast horizon (EU Commission, 2020). Russia's economic potentialities to be fully realised need structural solutions as regards the following aspects: (a) widespread property rights issues; (b) the outsized role of the energy sector and SOEs in the economy; (c) an improvement of the competition conditions, economic openness, and innovation. Indeed, it is a matter of fact that these structural changes are likely to be more limiting factor to growth under current circumstances of lower oil prices and subdued global demand. According to the EU Commission Directorate-General for Economic and

Financial Affairs (2020), the revamping of the macroeconomic framework after the 2014/2015 crisis helped to stabilize the economy but it was insufficient to lift potential growth. Consequently, only a moderate growth of 3% is expected in 2022. It is interesting to point out that the macroeconomic framework in its current form enabled interest rates to be slashed by a cumulative 500 basis points to 4.25% since 2017; in fact, inflation pressures remained contained and headline inflation remained below the 4% target for most of the last three years (2018-2020, see for details figure 4). According to the Central Bank of Russia (2020), headline inflation reached a trough in March of 2020 (2.5%) due to base effects and past RUB appreciation but rebounded to 3.7% in October. In the future, inflation is expected to stay below the target as good harvest in 2020 put a lid on food prices in the near term, private consumption remains subdued and favourable base effects kick in in 2021. In the response to the COVID-19 crisis, the government throughout the 2020, implemented a large set of fiscal stimulus measures (2.5% of GDP), including support to the health system, increased social expenses and a limited support to SMEs. Therefore, expenditures rose by almost 28% in 2020. Budget revenues were down by 12% over the same period, mostly due to lower oil-related income. As consequence, the fiscal deficit is set to reach 4¼% of GDP after a surplus of 0.4% in 2019. Going forward, the deficit is expected to shrink to about 3¼% of GDP in 2021 and 2% in 2022, as expenditures are set to decline given lower immediate pandemic-related needs, and new taxes, mainly on mining, are introduced. The higher spending in 2020 required adjustments to several budget rules and a strong rise in the issuance of domestic bonds to finance growing public debt, which is set to increase from 14% of GDP in 2019 to 22½% of GDP in 2022. Major downside risks come from oil markets as a worsening pandemic could further suppress both oil demand and prices. In addition, the investment climate could turn even more negative, as taxes rise and fiscal support will be limited. The major upside risks include a firming oil market, a waning pandemic and more fiscal support (EU Commission, 2020).

Agro-food policies in the Communist era: an overview

How collectivization affected the USSR agro-food sector

The analysis of Russia's agricultural policies shall also include the Communist Party's approach to the management of agriculture's issues in USSR. The key word for understanding USSR agro-food policies is "collectivization", which can be defined as the organization of all country's industries so that it is owned and managed by the government¹⁶. After the Bolsheviks took the power in 1917, several reforms aimed to shift the form of national-private agro-food farms to large scale production. Hereinafter, an overview of the main issues characterizing the agriculture "collectivization process" during the most relevant leaderships of the Communist era will be provided:

1. The Stalin period (1924-1953). As soon as Stalin became the USSR Communist Party Secretary, the "agro-food sector collectivization" speeded up by a long series of reforms, which affected rural/urban population and the socio-economic life. The main consequences for the population were: (a) consumer goods' shortages and poor-quality products; (b) poor planning-management systems and dysfunctional prices' policies adopted by the authorities. In the attempt of making food accessible to all, the government heavily subsidized the price of food. Thus, wholesale prices were lower than farm production costs, and retail prices were lower than wholesale prices (Pavlov, 1988). The result was an "excess of demand" for products that were under-priced at the retail level, leading to a chronic shortage. In rural areas, political choices to support the country's industrialization process harshly affected the peasants' wealth, and in particular: (a) the reorganization of the agricultural bodies (*Sovkhovozes and Kolkhozes*) for the transformation

¹⁶ Cambridge Dictionary definition.

of the USSR agricultural sector into an intensive industrialised activity; (b) the establishment of a “farmers’ super tax” as an over-payment that peasants had to pay for manufactured goods; (c) an under-payment received for the agricultural goods that they produced (Dyker, 1982). Farmers reacted angrily to the forced seizure of land. Furthermore, *Kolkhozes* and *Sovkhozes* were poorly organized, and food processing-distribution was inefficient. The state direct control over agriculture allowed to the USSR leadership to earn foreign exchange (used to support the heavy industry through the acquisition of industrial machinery) by increasing agricultural export (in 1931 was exported 18% of the wheat production). The result was a further surge of population affected by famine. Stalin provided some incentives to the peasants allowing households to farm small pieces of land and raise limited amounts of livestock. In 1953, 45.7% of the collective family farm income came from the private plots. This aspect suggested that: (a) farmers were able to feed themselves from private plots, which became their main economic activity; (b) the USSR agriculture collectivization process was doomed to fail (Ostrovskii 1967).

2. The Khrushchev period (1953-1964). In 1953, when Khrushchev became the USSR Communist Party Secretary, he made several attempts to fine-tune the problems affecting the country’s agro-food sector. An important decision was made to sharply raise the procurement prices. Thus, peasants’ incomes doubled between 1953 and 1967 allowing for an upward shift in the investments’ flow into the farm sector. Indeed, in 1950 agriculture accounted for 15% of USSR gross investment and by 1965 it had risen to 16.7% (Gregory and Stewart, 1981; Dyker, 1982). During the period of 1954-1965 improved incentives and increased investments facilitated a surge of 70% in the agricultural output (Gregory and Stewart, 1981). Although Khrushchev put several efforts to revive the national agri-food sector, at the same time he used many resources for various campaigns of questionable value, such as: (a) the corn campaign (ineffective at all)¹⁷; (b) the massive extension of sown area into the semi-arid “virgin lands”, which produced impressive short-term results at the cost of long-term environmental damage, as erosion set in (Dyker, 1982). Thus, in the early 1960s the USSR agro-food sector was once again affected by low growth rates. After “Stalin’s gloomy period”, Khrushchev surely improved the peasants’ economic conditions. However, although he went a long way towards decentralization, he did not address thoroughly the problems regarding: (a) ownership relation; (b) problematic relationships between producer and land; (c) producer and means of production, which all remained unsolved (Szelenyi, 1998). Finally, some of the issues affecting the agro-food sector during the Stalin’s era were not solved as well, considering that: (a) the strategy of encouraging extensive growth continued; (b) the imbalance between industry and agriculture persisted; (c) the Communist Party attempt to increase the agrarian production not only by channelling (inefficiently) resources and technological

¹⁷To increase meat supply, Khrushchev sought to popularize corn as a fodder crop. Corn’s areas rose from 4.3 million hectares (1954) to 18 million hectares (1955). The hot weather in two successive seasons allowed for abundant corn harvests. But rather than concentrating on more efficient agronomic practices, the USSR authorities expanded corn acreage to areas with unsuitable climate conditions and labour supplies. By 1960 the total acreage increased to 28 million ha, reaching 37 million by 1962. In 1964, cool spring and early summer throughout European Russia proved disastrous for corn. What made matters worse was that hay production declined throughout the country, from 64 million tons in 1953 to 47 million in 1965. These aspects compromised Khrushchev’s reputation as a wise leader: <http://soviethistory.msu.edu/1961-2/corn-campaign/>.

inputs, but also by expanding the amount of agricultural land in unfitted areas for grain crops.

3. The Brezhnev period (1964-1982). The Brezhnev period (1964 -1982) was marked by huge governmental efforts to solve issues such as: (a) provide adequate capital in agriculture; (b) acquire new technology and apply it efficiently throughout the entire country; (c) amend the imbalances in the regional agriculture; (d) correct the inefficiencies in the organization and management of farm work; (e) cope with consumer demands for more and better food and with pressures to improve the rural living conditions. From 1965 to 1985 about 28% of all investments were allocated to the agricultural sector (Szelenyi, 1998). However, the more resources government channeled into the agricultural sector (Table 2), the more bureaucratic structure was required by the Communist Party to manage these resources.

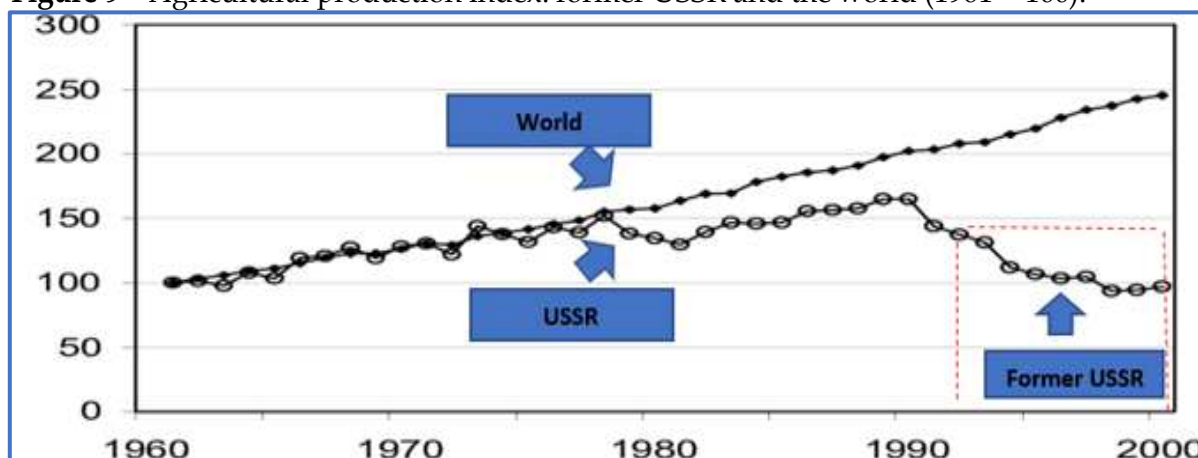
Table 2 - Investments in agricultural fixed assets covering the whole complex of work (in comparable prices; thousand million roubles)

	Total	By the state	By collective farms
7 th Five-Years Plan	54.6	31.3	23.3
8 th Five-Years Plan	92.4	54.6	37.8
9 th Five-Years Plan	147.9	94.2	53.7
10 th Five Years Plan	193.9	128.9	65.0
11 th Five-Years Plan	175.4	118.8	56.6
1981	41.8	28.4	13.4
1982	43.1	29.2	13.9
1983	45.6	30.8	14.8
1984	44.9	30.4	14.5

Source: Dando and Schlichting, March 1988.

Investments increased the agricultural productivity until the late 1970s (figure 9) at prohibitive financial-environmental costs. The USSR government neglected the structural problems of the agricultural production, which had the following negative consequences: (a) investments managed by bureaucrats created an agricultural system prone to imbalances (e.g.: food consumption did not increase as rapidly as food production); (b) bureaucratic inefficiency brought the country towards a lag of agricultural productivity (Szelenyi, 1998). Times series data (1960-2000) regarding the agricultural sector production index mark a growth at world pace during the 1960s and 1970s, followed by a lag since the beginning of the 1980s (Figure 9).

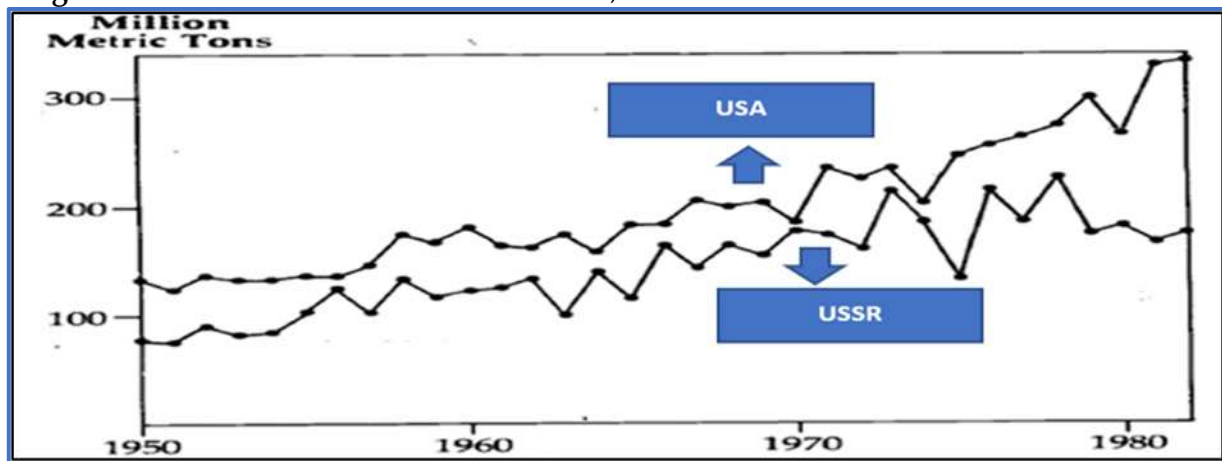
Figure 9 - Agricultural production index: former USSR and the world (1961 = 100).



Source: FAO on-line database, available at <http://www.fao.org>, Lerman et al., (2003).

At the end of 1970s - beginning of 1980s, USSR imported almost 50 million tons of grain: 1/4 of Soviet grain came from abroad. Over 1/2 of this imported grain came from the USA, and it filled part of 60-millions-tons-gap amongst the 1982 target of 230 million tons and the harvest of 175 million tons (USDA, 1982). The grain production trend between the USSR and the USA (its main competitor in that period) displays that although the USA grain output from 1950 to early 1970s was higher than the USSR's one, the rising trends in overall grain production in the two countries during this period were parallel (Figure 10) (USDA, 1982, Brown, 1982). However, since the mid-1970s, agricultural trends in the two countries diverged sharply (Figure 10). Because of the massive Soviet purchase of USA wheat in 1972 and tight world grain supplies in subsequent years, the USA government removed most of its grain production constraints. Between the early 1970s and the early 1980s the grain output boosted from 215 million tons per year to over 300 million tons per year.

Figure 10- USA and Soviet Grain Production, 1950-1982.



Sources: USDA and Brown, 1982.

The difference between the agricultural performances of the two geopolitical superpowers can be ascribed to several factors: (a) different technologies employed (modern USA grain and corn breeders created hybrids that led to additional significant increase); (b) USA farmers' market discipline (for USA farmers failing to carefully match fertilizer use and crops needs led to declining profits); (c) the fact that in USSR, with no market forces to impose discipline, farmers very often use agro-technical tools (fertilizers, pesticides, etc.) inefficiently; (d) the fact that the USSR farming premises could not be easily reached by shipments transporting agro-technical tools through the existing rail or road networks. Thus, the Soviets lost the advantage gained by the already mentioned massive investments in agricultural technical tools.

4. Gorbachev period (1985-1990). The structural crisis of the Soviet agri-food sector continued also in the second half of the 1980s. Due to the USSR struggling economic performances President Gorbachev launched a vast reform program including the agricultural sector. Compared to the previous years the amounts of investments marked a moderate increase with this program (table 2). The USSR leader tried to solve the persistent problems with food distribution responsible for the food shortage among the population. Gorbachev thought that an organizational reform was also needed. He was aware of Russia's agricultural regional diversity, which was impossible to manage from a central position. The decentralization of the decision-making system was a high priority of Gorbachev's political agenda. He also supported the maintenance of private plots by

kolkhoz peasants. Gorbachev tried to combine the strength of Khrushchev and Brezhnev policies implementing: (a) a policy of decentralization and autonomy for agricultural holdings and peasants; (b) investments in the modernization of the agricultural sector. However, the main weakness of Gorbachev's policies was that they did not tackle the ownership's issue, thus failing to realize that a property reform for the agricultural sector would have been necessary. During the period between 1985 and 1990 few efforts were invested to solve the price problem. In 1990, retail food subsidies accounted for 56% of the total agricultural subsidies, a statistic that rose to 80% in 1991 (World Bank, 1993). As the Soviet planned economy unraveled with the Gorbachev's reforms, the vast system of subsidies became unsustainable and inflation increased rapidly for food goods (Wegren, 2011). As in the previous years, many people relied on private plots to compensate for food shortages (an important supplementary source of food also for urban families). Tens of millions of collective and state farm workers, urban workers and their families were engaged in "private agriculture" in the 1980s (Gregory and Stuart, 1986). These plots also provided the rural households with means for survival during the turbulent 1990s. Probably Gorbachev's ambition to keep conservatives and pragmatists working together was an impossible task, and probably one of the main causes for the decline of his political career (Szelenyi, 1998).

Russia's agro-food policies

Russian agro-food policies: from the emergency context to the global achievements

The liberalization of the USSR economy in the early 1990s brought chaotic socio-economic policies also in the field of agro-food activities, which were more about undoing USSR legacy rather than building a distinct post-USSR model (Wegren, 2016). For example, the "Law on Peasant Farms" legalized private holdings and allowed them to operate alongside state and collective farms, to hire labor and to sell products without state supervision. Post-USSR agro-food policies saw a sudden withdrawal of the government from planning the production output. Thus, production was no longer guided by bureaucratic priorities, but by market forces instead (Wegren, 2016). Agro-food policies in the post-communist Russia may be divided into four periods, which will be discussed below:

1. The Yeltsin period (1992-1999). After Boris Yeltsin became the first President of the Russian Federation (May 1990), the enactment of the "Land Reform" and the "Russian Federation Law on Autonomous Farms" brought to the privatization of large collective and state farms. Farm managers gained the freedom to make production decisions based on consumer demand and to shift the structure of production accordingly. However, managerial behaviour was constrained by an economic collapse, decreasing the real consumer incomes and the demand for food. Large farms (former state/collective farms), faced with a decline of the consumer demand, disadvantageous terms of trade, and the lack of governmental financial support, cut their production (Lerman, 2002; Liefert and Liefert, 2012; Wegren, 2016; Rada 2017). By 1996 the government estimated that food production on large farms had fallen to 52% of the 1990 level (Goskomstat, 2000). Much of the responsibility for production subsidies was transferred to regional governments; federal subsidies that were budgeted usually were not distributed. As a result, the agricultural subsidies that had reached an estimated 20% of the state budget in 1990-91 fell drastically and large farms were left to fend for themselves. The reduction of revenues caused by the decrease of the consumer demand and the state subsidies led to farm

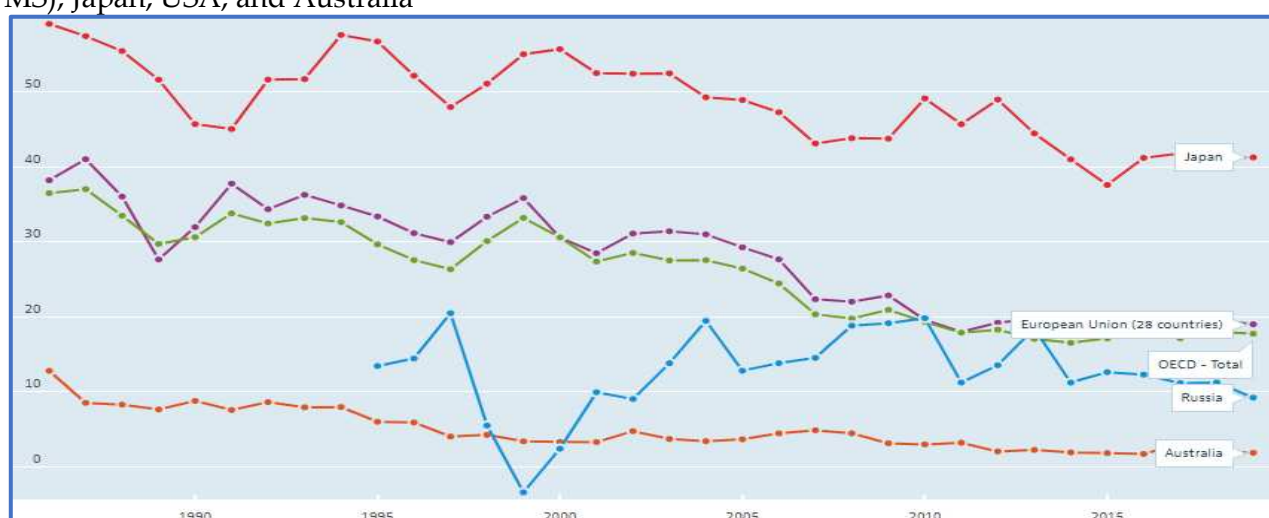
unprofitability (Wegren, 2016). In 1990, owing to extensive state subsidies and support only 3% of farm enterprises were unprofitable; by 1994 already 60% were unprofitable, and by 1998 nearly nine in 10 large farms were unprofitable (Goskomstat, 2000). The quick shift from a centralized economic system towards a free-market system also affected the consumption. Indeed, food retail prices that had been heavily subsidized in the USSR period were now free. Thus, state control over food retail prices ended for all but for a handful of products notably bread until 1993 (Wegren, 2016). The liberalization of the retail food process led to runaway consumer inflation causing a significant increase of the food products' prices: (a) 2670% in 1992; (b) 940% in 1993; (c) 330% in 1994; (d) 220% in 1995, before falling to a 13% increase in 1996 (Goskomstat, 2000). The combination of high inflation, wage arrears, and a decline of the living standard led to a significant increase of poverty, which became an acute social problem. If the Soviet Union was perceived to be food-insecure, post-communist Russia in the 1990s was even more so. The liberalization of the land policies provoked a doubling of the amount of land used by rural households for subsidiary agriculture during 1990-1996 (Wegren, 2016). Furthermore, after decades of slow decline, the area of land used by urbanites such as dacha plots increased too (Goskomstat, 1999). Thus, the number of transactions with the state declined from nearly 140,000 in 1993 to less than 45,000 in 1996, while the number of transactions between individuals increased from 10,000 in 1993 to more than 200,000 in 1995 and 1996. Therefore, farm debt and unprofitability soared. However, the land liberalization restructuring program progressed slowly (Wegren and Belen'kyi, 1998). In that period, although 95% of the state collective farms underwent some form of reorganization, about 1/3 of them retained their earlier structure. The vast majority of the remaining fractions chose the collective ownership (joint - stock companies or cooperatives) as organizational structure due to unstable conditions of the market faced by individual entrepreneurs. The second governmental response entailed liberalizing trade policy. Whereas Soviet foreign trade was planned and USSR imported mainly feed grain from the West, in the post-communist period the structure of food imports changed to consumer products. Even as the consumer demand for food decreased exacerbated by high food inflation, the volume and value of food imports increased, thus reflecting the inability of Russian farms to produce enough agriculture commodities to feed the nation. The size of livestock herds plummeted surpassing the declines that occurred in the early years of Stalin's collectivization, and thus meat imports soared. The import of grain for feed declined because of the precipitous decrease in the number of cows and pigs (Wegren, 2005). The main reasons for the Russian agro-food system poor performances in the 1990s can be summarized as follows:

- Agro-food sector market-oriented reforms were implemented too fast disregarding the effect that they could have had within an economic environment that was characterized by government planned and centralized economic policies ever since the Bolsheviks took power in 1917.
- The economic reforms caused output prices to fall below the real cost of production of goods, exacerbating the producers' terms of trade during the 1990s (Macours and Swinnen, 2000; Lerman et al., 2003). Russia's domestic agricultural terms of trade (output prices relative to input prices) in this period fell by 76 percent (Rada, 2017).
- The severe socio-economic conditions of the population (in the urban and rural areas) caused a decline of the government's revenues with a reduction of direct budget subsidies for the agricultural operators.

- The plunging of trade liberalization domestic prices compared to world prices and the elimination of the indirect price subsidies, as domestic prices for inputs and output had to adjust with world market demand and competition (Rada et al., 2017).
- The reduction of output below the real cost level of producing goods, which exacerbated the producers' terms of trade (Macours and Swinnen, 2000; Lerman et al., 2003). Russia's domestic agricultural terms of trade (output prices relative to input prices) in this period fell by 76 percent meaning that the revenue generated from a basket of agricultural products could buy on average only one-quarter of the inputs in 2000 that it could in 1990 (Rada et al., 2017).

Data demonstrate that the relevant plunge of Producer Support Estimate (PSE)¹⁸ caused a relevant decrease in the agricultural output (Figure 11).

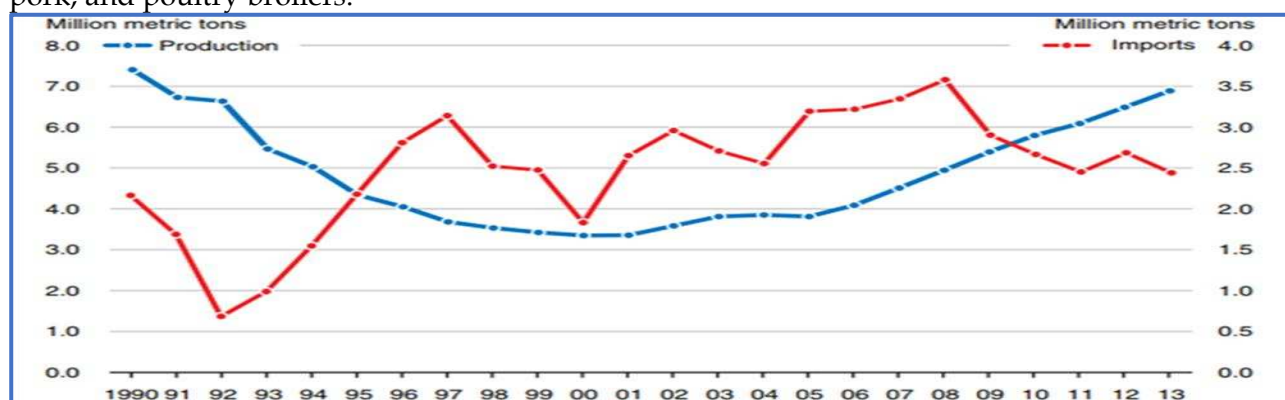
Figure 11 - PSE indicator trends (1986-2019) in the Russian Federation, OECD countries, EU (28 MS), Japan, USA, and Australia



Source: OECD - Agricultural support estimates (2020).

In this regard figures 12 and 13 show a relevant shrinkage in the agricultural output both for the livestock and the grain sector.

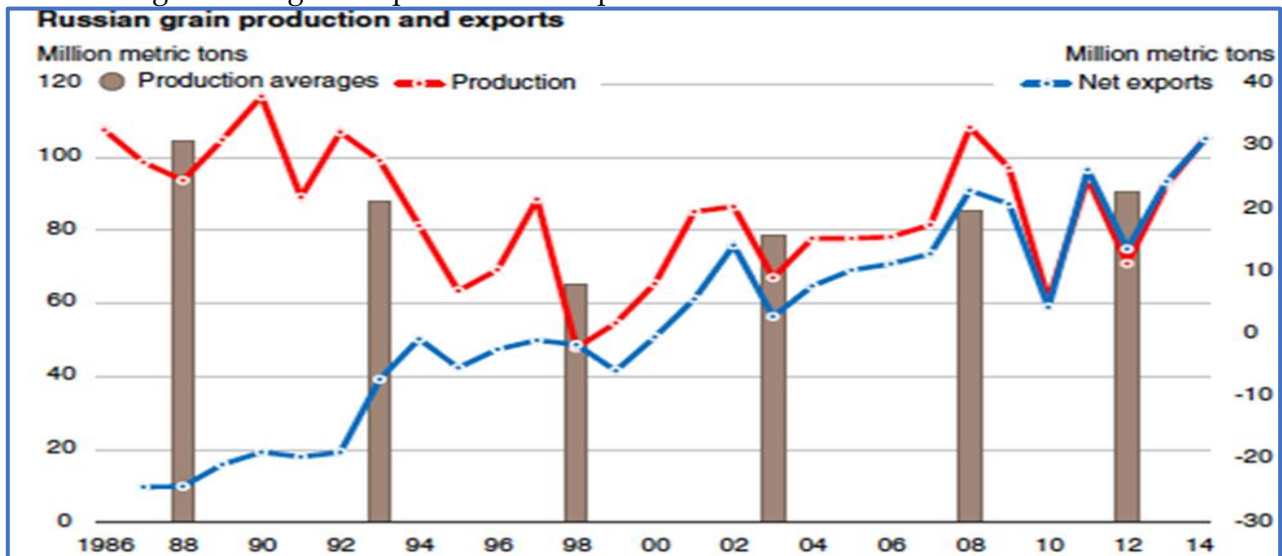
Figure 12- Russian meat production and imports note: both production and imports cover beef, pork, and poultry broilers.



Source: USDA, Economic Research Service.

¹⁸PSE: annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income. PSE % is the PSE as a share of gross farm receipts (including support).

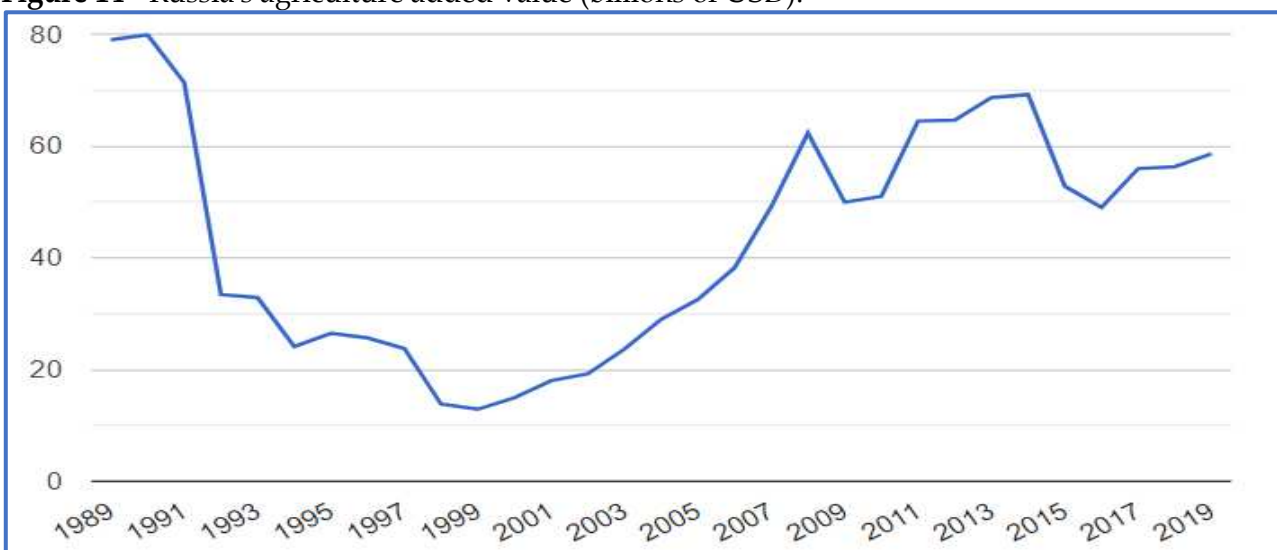
Figure 13- Russian grain production and exports trend 1986-2014. Note: The bars give average annual grain production over the periods 1986-1990, 1991-95, 1996-2000, 2001-05, 2006-10, and 2011-14. Negative net grain exports are net imports.



Source: USDA, Economic Research Service using Russian Federal State Statistics Service and Ministry of Agriculture data and USDA, Foreign Agricultural Service, Production, Supply and Distribution database.

Additionally, the analysis of the Russian agricultural sector added value highlights that from 1991 until 2000 the country's economic performance plunged noticeably compared to the previous years with a minimum of 12.89 billion of USA dollars in 1999 (Figure 14).

Figure 14 - Russia's agriculture added value (billions of USD).



Source: the GlobalEconomy.com.* For that indicator, the World Bank provides data for Russia from 1989 to 2016. The average value for Russia during that period was 43.14 billion USA dollars with a minimum of 12.89 billion USA dollars in 1999 and a maximum of 79.9 billion USA dollars in 1990.

The Yeltsin period witnessed an overall decline of the agro-food economic performances. Also animal stocks declines exceeded those related to Stalin's collectivization. Furthermore, land reclamation virtually ceased and harvests fell. The extraordinarily bad harvest and the financial crisis led to regionally imposed price controls on food products. The analysis of the PSE and added value trends (Figures 11 and 14) show the magnitude of the economic crisis, which brought to an end the governmental help for producers in 1999.

Thus, Russia's food sovereignty fell in the hands of the western agro-food exporting nations in an attempt to prevent starvation in many of its regions.

2. First period of Putin's agro-food policies (2000-2008). When Putin became president of the Russian Federation in 2000, the national agro-food sector was in poor conditions due to Yeltsin's ineffective policies. Thus, the focus moved from the liberalization of the economic activities to a new model of governance (similar to the “development state or hard state”¹⁹) with heavy governmental influence and a special focus on agriculture. Putin’s presidency goal was to raise the output volumes to the levels reached at the end of the 1980s and reduce notably the country’s dependence on food imports. The state strategic document “Directions of Agro-food Policy towards 2010” highlighted Russia's intention to strengthen the rural economy and stabilize food production by: (a) improving the agricultural operators’ financial status through debt reduction and increased budgetary allocations, allowing them to expand the production; (b) employing customs and tariff policies to ensure the incomes growth of the Russian agro-food entrepreneurs; (c) allowing domestic producers to compete with foreign imports by greater regulation of the grain market; (d) fostering credit organizations to improve access to finance; (e) improving the stock of agricultural machinery and changing the process of leasing; (f) supporting land consolidation policies. Hence, Putin created a state-owned agricultural bank²⁰ by which state-credits and subsidies could be channelled to the rural areas during the sowing season. The government decided to: (a) defer farm debt repayment and wrote off tens of billions of roubles in penalties for late payment; (b) introduce a state intervention system in the grain market by buying grain to protect grain producers in surplus year (Wegren, 2016); (c) support the “integrated agro-holding model” as an essential pre-condition to accelerate farm production, rather than rely on greater output from small family farms. With this approach the government also aimed at increasing farms’ profitability and reducing the private households share in agricultural production (Kalugina, 2013). In 2002 arrived the approval of other legislative provisions allowing a free sale of land, which led to an expansion of the agricultural business and faster development of the land consolidation process. Around 82% of the agro-holdings and large-scale farms were reported as profitable during 2012. Also, a 2 billion rouble intervention fund was introduced to stabilize grain prices, whereby the authorities purchased grain in bumper years and released this grain during periods of shortage (Kingwell et al., 2016). Economic macro-results suggest that government support for domestic agro-food sector was successful considering that: (a) by the end of 2008, the nominal ruble value of agricultural production rose to more than 330% compared to 2000 (Rosstat, 2010); (b) the percentage of unprofitable large farms fell to the 25-30% range, a far cry from the 1990s; (c) after 2006, Russia began to export significant quantities of grain; (d) personal incomes had grown by almost 800% (in nominal rubles) for all workers in the economy since 2000 (Wegren, 2016). Putin’s agro-food policies during his first presidential mandate were open but not entirely so. Indeed, despite the growth in food imports,

¹⁹Developmental state, or hard state, is a term used by international political economy scholars to refer to the phenomenon of state-led macroeconomic planning in East Asia in the late twentieth century. In this model of capitalism (sometimes referred to as state development capitalism), the state has more independent, or autonomous, political power, as well as more control over the economy.

²⁰Russian Agricultural Bank is a state-owned bank based in Moscow. The bank was established pursuant to the Decree of the then acting Russian President Vladimir Putin on March 15, 2000, to support the development of agriculture and agro-industry.

starting in 2001 Russia began to use import quotas, and later, tariff-rate import quotas (TRQs)²¹. The latter are permitted under the World Trade Organization (WTO) rules.

3. The Medvedev period (2008-2012). The main national agro-food policies that were introduced in the previous years, continued also with Dimitri Medvedev who was elected President of Russia in 2008 (Yaffa, 2015). The agro-food policies during Medvedev's presidency are marked by three aspects:

- *Huge government support.* The 2008-2012 state program for the agro-food development reached an unprecedented level of governmental support for domestic production. More than 1 trillion of roubles were allocated to support the national agro-food sector. However, after three years of good harvests, in 2010 Russia lost 1/3 of its harvest due to an anomalous dry season; the harvest came in at only 60 million tons. Thus, state support increased as the government introduced emergency measures to protect livestock herds. The government's reaction to the emergency solidified the belief that state assistance was the primary mechanism that spurred growth or averted disaster (Wegren, 2011).
- *The rise of food insecurity.* This is a rather curious outcome, considering that domestic production had rebounded, farm profitability was up, personal incomes were increasing, and the national poverty rate was declining. Policymakers' concerns over food security may have stemmed from vulnerabilities in the Russian economy during the financial crisis of 2008-2009 due to the rising bill for food imports, or simply because of leadership insecurity tinged with Russian nationalism (Wegren, 2016). The outcome was the introduction of a food security policy signed into force by Medvedev in January 2010, which implied reduced import quotas and rising import tariffs on meat and pork, continued use of food import bans, and a year-long export ban on grain due to the poor harvest (Elvestad et al., 2010). The approaching WTO membership caused a general import tariffs reduction for Russia (Liefert et al., 2009). However, as it happens, on the eve of WTO accession Russia maintained the use of Tariffs Rates Quotas (TRQs) applied to meat imports. In the last year of Medvedev's presidency (2012) Russia joined the WTO but was given a transition period to come into full compliance with green box requirements in agriculture.
- *Export increase.* Medvedev was determined to put Russia on the throne as a key international agro-food export player. The government targeted the Asian region as a growth market, allocating federal funds to the country's far east region to improve the infrastructure and facilitate food exports. Russian leaders set a goal to export 40-50 million tons of grain by 2020. Hence, domestic subsidies contributed to a post-Soviet record harvest in 2008 with 108 million tons after cleaning. The USA Department of Agriculture estimated that Russia could become the number one exporter of wheat by 2019, surpassing the United States (Liefert et al., 2010).

4. Second period of Putin's agro-food policies (2012- present). With Putin's re-election in March 2012 there were several positive socio-economic indicators considering that: (a) the rouble value food production had nearly quadrupled compared to that in 2000; (b) the

²¹TRQs apply lower tariff rates up to an established quota and apply much higher tariff rates above the threshold. TRQs were applied to imports of beef, pork, and poultry. It was also during Putin's first two terms that import bans became common, particularly, but not exclusively, against poultry from the USA (Wegren, 2005). These bans became more frequent but were temporary and were applied against specific states or processing plants. Once the sanitary concern was addressed to the satisfaction of the Russian side, the ban would be lifted.

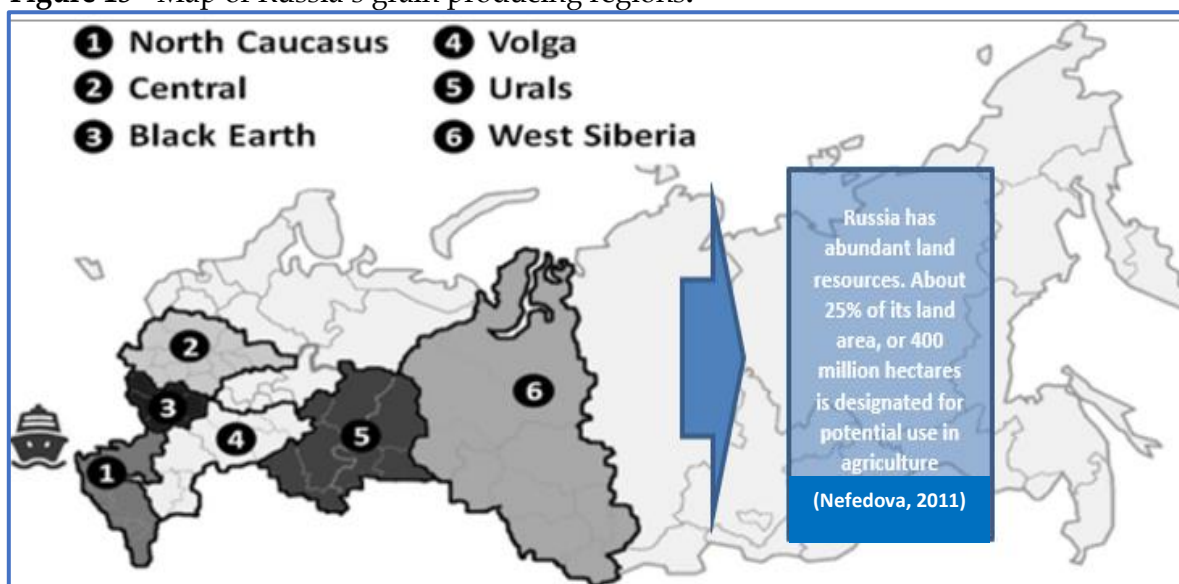
agricultural sector rebounded from severe drought in 2010; (c) the economy recovered from the financial meltdown of 2008-2009; (d) the poverty rate declined to a post-Soviet low; (e) the percentage of profitable farms increased so that nearly eight of ten large farms turned a profit (Wegren, 2016; Shagaida and Uzun, 2013). With the WTO membership Russia seemed to enter a new cooperation phase. In 2012 the Government adopted the “State Program for Development of Agriculture and Regulation of Agricultural Commodities Markets in 2013-2020”, which envisioned 1.5 trillion of roubles and encompassed the following issues: (a) the increase of food production by 21%; (b) the increase of processed food production by 35 %; (c) the increase of investment by 42 %. The state program contained financial support for six subprograms (plant production and processing, animal husbandry production and processing, meat production, technological modernization, development of small scale farming, program administration). Furthermore, the same program contained two federal targeted programs on rural territories development and land reclamation. The main concern of Russia’s agro-food policies was the country’s ability to adapt to the new conditions and requirements imposed by the WTO membership and the governmental support effectiveness to lead the Russian agriculture to the top (Wegren, 2016). As previously mentioned, the Crimea’s crisis was of crucial importance for the development of Russia’s agro-food and trade policies. The establishment of Western sanctions after the annexation of the Black Sea peninsula provoked Moscow to impose import ban on some agro-food goods originated from the countries that declared sanctions on Russia, such as the USA, EU, Canada, Australia and Norway (extended later on Albania, Montenegro, Iceland, Liechtenstein and the Ukraine). The import ban included beef and pork of all kinds, poultry products, smoked foodstuffs, dairy products (including raw milk) as well as fish, and fruits-vegetables products. As a result, the Russian government increased the support for domestic agriculture in order to become more self-reliant. Thus, in December 2014 the agriculture development state program was amended and federal expenditures were raised to 640 billion roubles over the original amount (increasing to more than 2.1 trillion roubles in federal expenditures). The first order priority of the state program is “to achieve food independence of the country within the food security doctrine parameters” (Ministry of Agriculture, 2015). The main consequences were:

- The value of agro-food exports to Russia from the Euro 28 reduced by 43 %, being Euro 11.0 billion in 2013/14 compared with less of Euro 6.3 billion during 2014/17 (Kingwell et al., 2016).
- The bans fuelled food and general inflation in Russia and lessened food availability to the local population, providing at the same time additional export opportunities for countries like Brazil (not being subject to the ban); additionally, production opportunities arose for Russian producers of foodstuffs.
- The downturn of the energy sector, which led the government to view agriculture as a future engine of economic growth. Prominent Russian policymakers agreed that new drivers for Russia’s economic growth must be considered, and in particular: agriculture, chemicals, the food industry and the domestic tourism.

The above statements are correct, considering that a well-organized and efficient agro-food sector can generate several positive socio-economic externalities, providing not only the main source of employment, but a range of other measurable benefits such as: (a) social cohesion; (b) sense of purpose. Both are in turn powerful drivers of well-being. Thus, the reforms implemented by the Russian government in these last 10 years in the agro-food sector have been able to provide to the country food security, self-sufficiency,

and exportable surpluses that generate foreign currency. The government's choice to focus on the agro-food sector's modernization and efficiency has been extremely appropriate, considering that the Eurasian country is blessed not only with energy resources but also with ample arable lands, which facilitate food production and make Russia less vulnerable in any conflict. Currently, wheat production in Russia is concentrated in a limited yet spatially protracted area with six economic regions accounting for more than 95% of the total wheat production in Russia (Figure 15). North Caucasus is the largest wheat producing region (40%), followed by West Siberia, Volga and Black Earth (each with a 15% share), while the wheat production in Ural and the Central region constitutes 8% and 7% respectively of the total wheat production (Rosstat, 2019).

Figure 15 - Map of Russia's grain producing regions.



Source: Swanidze and Götz, 2019.

Thus, the country's self-sufficiency in food production and energy, and the ability of the Russian economic diplomacy to export affordable grain, has undoubtedly strengthened its trading negotiating position in any possible dispute with several countries (especially those belonging to the MENA region). In this regard, agricultural goods have become Russia's second biggest export after oil and gas. Besides the increased governmental subsidies to farmers, the sector has also benefited from Russia's geographical position with highly fertile "black earth" regions in central and southern Russia located close to the export terminals on the Black Sea. Finally, as will be analysed in the next section, the trade routes allow the country to supply important North African and Middle Eastern wheat importers such as Egypt.

At the origin of the Russian influence in the Middle East

The new Russian policies in MENA regions

As the USA (but also France and UK) standing in the MENA region has declined, Russia has been able to fill the power vacuum and position itself as a mediator and strategic partner in this area especially in the last five years. In the past, Russia has operated in the Middle East by applying traditional hard power strategies, supplying arms and equipment in support of regional hard-liners. However, Kremlin's strategy has shifted

significantly in the recent years due to the new importance of rebuilding Russia's reputation as a reliable ally (Cerulli, 2019). Moscow is also increasingly using soft power strategies to project influence throughout the Middle East. The successful exercise of soft power is a pivotal part of Putin's renewed quest for "great-power" (Gunitsky, 2019). Achieving the "great-power" goal requires an extension of the Russian influence via soft power mechanisms into the MENA region, where hard power alone has been insufficient. Thus, commercial relationships between Russia and the countries belonging to the MENA region represent one of the key elements of the new Kremlin's strategy. Agricultural trade of grain products between Russia and several countries belonging to the MENA region is a strategic activity through which Russia has gained prominence as a player in the Middle East.

While several Western elites consider Russia to be a permanent threat, it is difficult to ignore that the Eurasian country's reputation in many other geopolitical areas and in particular in the MENA region is much more complex than that. There are probably different causes for the recent success of Russian policies in the region and especially in Syria: (a) the failure of the neo-conservative American policies in the MENA area; (b) an innovative policy in the region implemented by the Russian political elite. The latter aspect seems to be quite relevant; indeed, during the USSR era, authorities established a fruitful cooperation with the Arab world and Iran, but then this context changed significantly after 1991, considering that Russia was completely absent from the MENA region (Kozhanov, 2018). The lack of Russian presence in the MENA can be ascribed to a series of factual and ideological reasons: (a) the domestic economic and political turmoil of the 1990s, which limited Russia's export capacities diverting the attention from foreign to domestic policies; (b) the loss of the Ukrainian ports (main trade gateways of the Soviet Union to the Mediterranean), which affected business contacts with the Middle East (by the mid-1990s, the Arab countries made up just 1% of Russia's annual trade: Olikier et al., 2009); (c) the opposition of Russian policymakers to the development of relations with MENA countries because they saw the country as a part of the Western world, and so they were reluctant to develop those non-Western diplomacy vectors.

After the end of the Yeltsin era, Russian officials tried again to build up closer relations with certain MENA countries. The return of Russia in the Middle East has been guided by the unfinished quest for the Russian identity, being both European and Asian country with Slavic and Muslim population. It also carries a definite heritage from the Tsarist, Soviet and post-Soviet periods. Therefore, Russia is a country that was built during the last twenty years. It is a bridge with the 'Muslim world', where Putin intends to play a defining role. However, these relations are affected by the jihadist threat on the Russian territory (Chechnya and Dagestan) and the memory of the war against the mujahideen in Afghanistan. Thus, Moscow is playing its part in the fight against terrorism, trying to avoid possible destabilization of central Asia, that is its "near abroad" (Therme, 2014). For example, in 2003 President Putin carried out an intensive diplomatic action by visiting Egypt, Algeria, Jordan and Iran. In addition, Moscow concentrated its effort not only on rebuilding the contacts with the old partners of the Soviet Union, but also to broaden its own influence in the region through active dialogue. Thus, in 2007 Putin visited Saudi Arabia, Qatar and the UAE (, 2010). On the contrary, Medvedev's presidency (2008-2012) was characterized by a de-prioritization of the relationships with the MENA countries, to be rebooted after 2012.

Therefore, with the "second phase" of Putin's presidency, Russia started looking again at the MENA region as an opportunity. According to Kozhanov (2018), the

transformation of the Russian economic and diplomatic policies towards the MENA region can be divided in three different periods:

1. From 2012 to 2013. During this short period there was an increasing diplomatic activity with regional players. Russia abstained from direct involvement in the domestic affairs of the region, acting as a neutral power in ongoing conflicts. Relationships with Iran were reshaped as well as those with another influential regional player such as Egypt. In that period Moscow's diplomacy reopened a fruitful dialogue on a wide range of diplomatic and economic issues with all the powerful MENA countries to avoid international isolation because of the tensions with the West.

2. From late 2013 to 2015. Russia was increasingly involved in the Middle East domestic affairs that went beyond diplomatic approach, with the fully involvement of the country in the Syrian conflict (September 2015). On this occasion, Russia's tough stance had a positive influence on its relations in the Middle East, considering that Moscow proved its ability of protecting its partners. Russia is still involved in the Syrian conflict mainly because of: (a) growing concerns over the participation of Russian speaking fighters on the side of anti-Assad forces; (b) intentions to prevent Western efforts to displace Assad (c) concerns that the fall of Assad's regime could lead to the spread of instability and radical Islamism in the post-Soviet space.

3. From 2016 to nowadays. Russia recognizes the need to implement a new phase of diplomatic/economic relationships in the MENA region. Nowadays, Moscow is going to establish its largest hub of wheat exports in Syria thanks to a commercial agreement with the Syrian government. Setting up a Russian wheat export center in Syria towards the other countries in the region will be of strategic importance for the Russian agro-food economy.

In relation to the latter issue, Russia's companies are fully involved in the reconstruction and expansion of Syria's ports by creating contemporaneously granaries in the port areas to store large volumes of Russian wheat. Furthermore, in the next years the country is starting to build new roads and railways to transport persons and goods (such as wheat) to the neighboring states. The geopolitical crises provoked by the disputes with the USA and EU on the activity in Syria and Ukraine had a key role in the diplomatic rapprochement process between Moscow and MENA countries; furthermore, the other driving forces at the origin of this process can be mainly ascribed to:

1. The strategic (economic, commercial, and military) necessity aimed at improving relations with these countries.

2. The need to create leverage to affect significantly the behavior of the USA and EU and mitigate the negative effects on the Russian economy, security and international relations caused by the ongoing confrontation between Moscow and the West (Kozhanov, 2018).

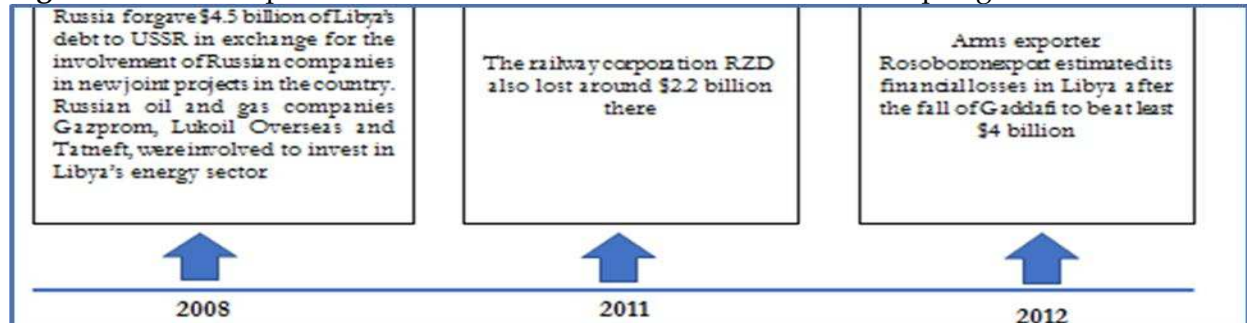
3. Considerable differences between the current situation and the previous Russian attempts to build close relations with the Middle East. This difference is largely determined by the scale and intensity of Russia's disagreements with the EU and USA (Connolly 2015).

4. The current leadership regards that Russia, being a country that lies between Europe and Asia, shall diversify its political and economic diplomacy. This inevitably drags the Middle East into Russia's sphere of interests.

5. The results of *Arab Spring*. The Kremlin considered the *Arab Spring* at least partially as USA and EU plot; therefore, the Russian government felt it had no choice but to become more deeply involved in the case in order to balance the political situation and to prevent repercussions in Eurasia.

Of course, the *Arab Spring* affected the Russian economic interests in the MENA region, and this specific factor was the main driver which reshaped Moscow's strategies in this area. During the *Arab Spring*, Russia sustained heavy economic losses (the total cost of which has not been determined yet) as illustrated in figure 16.

Figure 16: An example of the Russian economic losses after the Arab Spring.



Finally, during the Medvedev's presidency Russia did not put veto on the UN Security Council resolution allowing the US and EU intervention in Libya. After the failure of these pro-Western policies, which led to the deposition of Gaddafi and the destabilization of Libya, Russia had to reshape its approach to protect the country's economic interests also in the agro-food sector (Cerulli, 2019).

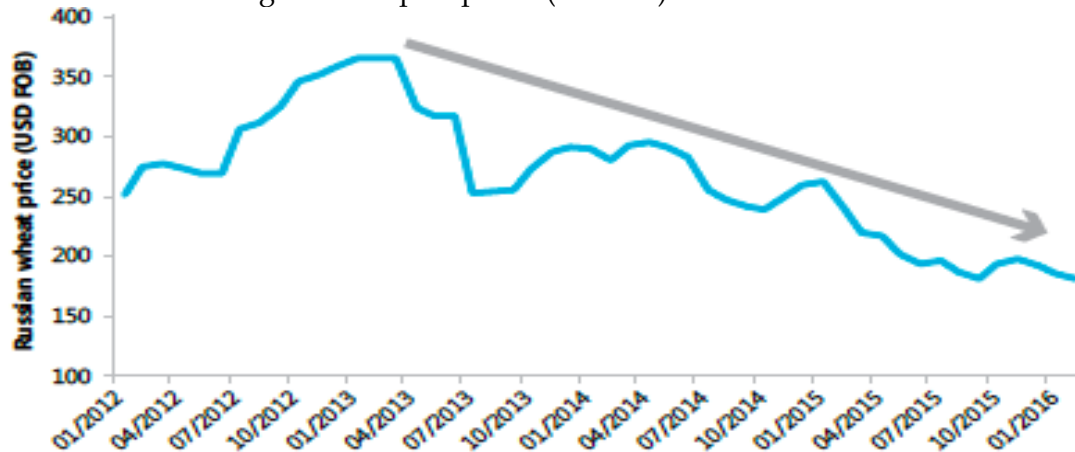
Russia's agro-food business in the MENA region

Russia's competitiveness in the grain export towards MENA and other international markets

During the last twenty years Russia's agro-food sector and its grain industry enjoy significant competitive strengths. It has been highlighted that the agro-food sector can play a key role for the geopolitical influence that one nation could have over another one. It is remarkable how Russia authorities and business environment interpreted the function that an effective and well-organized agro-food sector might have in extending Moscow influence (together with the energy and military sectors) in a strategic area such as the MENA region.

Since the early 2000s, Russia, Ukraine and Kazakhstan have emerged as the largest global suppliers of wheat with about 30% of global wheat trade (Kingwell, et al., 2016). As mentioned previously, Russia is the largest grain player in the Black Sea region, having surpassed its neighbors in economically, politically, and geographically. Ahmed et al., (2017) pointed out that the country improved step-by-step its position as a major player in the wheat global value chain (hereinafter, GVC). Russia is now the world's largest supplier: during the period 2015-2019 the country supplied averagely 27 MT of wheat worldwide. Since late 2012 the export price of Russia's wheat had a downwards trend: from above \$ 350/t to somewhat \$ 200/t. Figure 17 data show the price shrinkage until 2016. This trend has been roughly the same also for the year 2017.

Figure 17 - Russian milling wheat export prices (2012–16).



Source: Abstracted from Apk-inform price data.

During the season 2018-2019, wheat export prices reached their peak in the first half of February when some exporters offered grain (with 12.5% of protein content) at 250 and 233 \$/t at the ports of Black and Azov seas respectively. After this and until the end of the season the downward price trend prevailed (around \$ 200/t) and there was some slight and short price rise (Timofeyeva, 2019). Throughout the 2019-2020 seasons (since the end of September) the prices started gradually increasing on the export market of wheat and accelerated highly in October. The prices were supported by strengthening of the RUR/\$ parity and by the increase of the wheat prices on the global markets due to the harvest delays in the USA and Canada (because of the unfavourable weather conditions) and lack of rains in Argentina and Australia. During November the prices on this market did not move mostly, but in December they started to increase again due to the lowering of the wheat and corn production forecasts in Argentina, the further strengthening of the Russian currency and the rather stable demand of the key importers. Thus, by mid-January the offer prices of wheat (with 12.5% protein content) in the Black Sea and Azov Sea ports reached 220-225 and 201-205\$/t respectively. This trend did not change significantly throughout summertime (Timofeyeva, 2020).

Box 3. The increase of Russia's wheat prices as consequence of new introduced restrictions

Russian wheat export prices breached the \$300/t mark on 18 of January 2021, as concerns mount about "floating" export taxes, with sources expecting the uptrend in prices to continue in the near term (S&P Global Platts, 2021). Russia government confirmed in December 2020 it was imposing a wheat export tax and a grain quota export that will limit shipments to 17.5 MT, as the country looked to tackle domestic food inflation. The export quota mechanism is set to begin from February 15 through June 30, and cover wheat, corn, barley, and rye (the so-called 'grain'). The export tax was initially announced at Euro 25/MT within the quota volume and 50% of the value, but not less than Eur100/MT outside of the quota (S&P Global Platts, 2021). However, the Russian Agriculture Ministry recently stated that it will start implementing a higher export tax from March and indicated the taxes may not be scaled back to zero when the new marketing season starts in July. This statement caused a price shockwave through the markets. The proposal to introduce a "floating tax" from July 1 (if confirmed) could impact next season's trade, according to US-based advisory firm Agrivisor. As reported previously, to mitigate domestic food prices, the government increased the export tax within the quota to Euro 50/MT, that will come into effect on March 1. In this regard, S&P Global Platts Analytics and Sizov (2021) pointed out that the current situation of Russian grain market can be explained considering the following aspect:

1. Government move came despite a near record harvest during 2020-2021 marketing season (that runs from July 2020 to June 2021). Estimates, provided also by S&P Global Plats Analytics, stated that Russia will produce 81.5 MT of wheat in 2020-2021. However, concerns over the Russian winter crop following drought during the planting period began to add a bullish sentiment to the market. The global wheat market also tightened amid the COVID-19 pandemic and food security concerns, resulting in a flurry of international tenders.
2. Wheat exports from Russia rose dramatically to satisfy the soaring demand, pushing prices from \$197.50/MT in mid-August to more than \$250/MT by October.
3. A weakening Russian RUB, decrease in yields for numerous crops, and an increase in global food prices, also contributed to the rise in domestic food prices.
4. Surging domestic food prices created an uneasiness within Russia, forcing the government to initiate the export curb policies.

Before the season 2020-2021, at price close to \$200/t it has been possible to profitably grow wheat in Russia (Kingwell et al. 2017). Until now, this aspect has been particularly important considering that the international price of wheat being at very low prices is still putting significant competitive pressure on wheat exporters in higher-cost regions: USA, Australia, and Canada. During the last twenty years, Russia's ability to supply large quantities of low-cost wheat and the MENA region's reliance on steady supply of cheap imported wheat, represent a relevant driving force of their trade relationship. Accordingly, strategic countries such as Turkey and Egypt are currently the principal buyers of Moscow's wheat. Turkey, having a well-organized and the largest in the world flour milling industry, has great financial benefits from purchasing cheap Russian wheat. Indeed, in the last seven years (2012-2019) it has been the world leader in flour exports to over a third of the world market and it looks like this will continue throughout 2021. The country's location providing easy access to raw materials, markets and logistics opportunities helps Turkey to reach this significant increase. In Box 4 are reported the main aspects of the Turkish milling industry and its commercial relationships with Russia's wheat sector (considering that Turkey during the period 2019-2020 emerged as a major Russian wheat importer).

Box 4. Turkey's milling industry a strategic partner for Russia's wheat sector

In 2020, Turkey has emerged as a key player in the international wheat market as imports increased to records level. Lower production and higher domestic consumption increased government imports to stabilize domestic prices and an explosion in the export of wheat-based products. Domestic wheat consumption in Turkey increased by 1%, in the season 2019-2020 (compared to the previous one) reaching about 20.0 million metric tons. The majority went into human consumption products such as flour and pasta with the balance used as stock-feed. Wheat-based products' consumption has increased dramatically in recent years for several reasons such as: (a) nowadays, has a population of 81 million people, with a yearly growth rate of 1.2%; (b) the country is currently hosting about 5 million refugees, double what it was only three years ago, and they are highly reliant on basic staples such as bread; (c) the Turkish economy has been faltering in recent times with per capita income falling for the past two years; (d) the latter issue combined with a reduction in purchasing power due to a devaluing Lira, has forced the population to increase consumption of wheat-based products at the expense of protein. Turkey, despite being close to wheat self-sufficiency, is expected to import around 10.5 million tonnes, predominantly from Russia, by the end of the current marketing year: an annual increase of 61% (Grain Brokers Australia, 2020). Thus, Russia became the leading supplier of milling wheat to Turkey with 4.8 million tonnes imported so far in this marketing year. In fact, so far Turkey surpasses Egypt as Russia's biggest wheat export customer in the 2020-21 seasons. The strategic partnership between

the Russian wheat sector and the Turkish milling industry will certainly last for a long period considering also that Turkey has increased its flour exports twofold and pasta exports more than sixfold in the last decade. Indeed, Turkey is now the world's largest flour semolina and cracked wheat exporter and second-largest pasta exporter (Grain Brokers Australia, 2020). With import policies guided by downstream export demand, it is typical for Turkey's imports to mirror its exports in terms of total wheat-equivalent. However, throughout the period 2019-2020, imports are expected to substantially exceed exports as production has been less than domestic demand, and the government has been actively increasing wheat reserves. According to Turkey's agriculture and forestry minister, international wheat trade generated US\$12.5 billion profit for the Turkish economy in the last 17 years. While Turkey imported 63.7 million tonnes of wheat worth US\$17.4 billion between 2002 and 2019, the country exported 75.7 million tonnes of wheat and wheat-based products such as flour, pasta, and biscuits worth US\$29.9 billion (Grain Brokers Australia, 2020). The last six months of 2020 showed a slowdown for all wheat product exports. This latter issue has been related to additional COVID-19 pandemic measures at the Turkish borders, which ensured safety for workers but slowed down the rate of shipments.

Egypt is the other Russian strategic commercial partner. Focusing on the wheat sector, Egypt relies on the Russian participation in the General Authority for Supply Commodities (GASC) tender process to ensure that Egyptians could access affordable wheat-based products. This aspect is particularly important considering that more than 40 million Egyptians enjoy governmentally subsidized wheat. Furthermore, although Russia is one of the cheapest sources of wheat (mainly due to the devaluation of the rouble), its recent history of occasional wheat export bans has induced Egypt to seek alternative partners for its wheat imports, such as Ukraine or even the EU. Considering Russia's past with wheat export restrictions, Egyptian policymakers and the GASC hierarchy are cautious not to jeopardize their food security by relying solely on Russian wheat (Kingwell et al., 2016). However, in the last twenty years there has been a continuous dominance of Russian wheat on GASC tenders. The commercial relationships between Cairo and Moscow especially since the second half of 2000s, has grown particularly solid also in many other economic sectors (defence, energy, high-tech industries, education and culture), as reported in Box 5.

Box 5. Egypt and Russia: a new advanced cooperation

In terms of bilateral Egyptian-Russian relations, Russia is one of Egypt's largest trading partners. Trade exchange between Egypt and Russia has achieved remarkable growth in 2018, reaching \$ 7.66 billion, while Egypt's exports to Russia increased by 4.1% in 2018 to reach \$ 526.4 million compared to \$ 505.6 million in 2017. This is due to the increase in Egyptian exports of agricultural crops as well as industrial commodities, especially pharmaceutical products and food and chemical industries. However, Egypt aspires to a greater increase in Egyptian exports to ease the large trade deficit between the two countries. On the economic side, the Russian Industrial Zone project in the Suez Canal Economic Zone is Russia's first off-shore project. The Russian capital in the infrastructure projects of the project amounted to \$190 million, while the expected investment is about \$ 7 billion. Until now, about 55 Russian companies have expressed their keen in investing in this project, which will create about 150,000 jobs. Both countries have agreed to finance and supply 1,300 railway wagons to develop the railway sector in Egypt and discuss joint manufacturing steps for these wagons, as well as ways of enhancing cooperation and coordination between Egypt and Russia in African markets. On the bilateral level, the two countries signed on December 11th, 2017, an agreement to establish Egypt's nuclear power project in Dabaa region. This project is the largest joint venture between Cairo and Moscow. It also helps in the transfer of advanced technology in this field, which Egypt needs in the framework of an integrated energy

strategy that will make Egypt a regional and global centre for the production and circulation of energy (Egypt State Information Service, 2019). In November 2020, the Egyptian Minister of Industry and Trade met his Russian counterpart during the 13th session of the Egyptian-Russian Joint Ministerial Committee for Trade, Economic, Scientific and Technical Cooperation, held in Moscow. The committee strengthened the already well-established cooperation between the two countries in various fields such as: trade, finance, industry, investment, energy, education, agriculture, information technology (IT), health, transportation and tourism. The Minister and other Egyptian officials stressed the importance of benefitting from the distinguished relations that bind the two countries in boosting economic relations, especially at the commercial and industrial levels, for the benefit of both Egyptian and Russian citizens. Minister Gamea explained also that the meeting reviewed the latest developments in the establishment of the Russian Industrial Zone in Egypt, which makes Egypt a focal point for the launch of Russian products to various global markets, especially the Middle East and Africa, noting that 32 Russian companies have announced their desire to establish projects in the region where it is planned to start work in the region. Furthermore, in September 2020, Russia started to establish a new industrial zone in the Suez Economic Zone, which is expected to attract \$7 billion in new investments, according to new Russia's ambassador to Egypt Georgy Borisenko. The ambassador indicated interest from Russian companies to invest in the industrial zone, which according to Egyptian government data will cover an area of 5.25 sq. km and provide 35,000 direct and indirect job opportunities, 90 percent of which will be filled by Egyptians. Project's implementation will take 12 years with a 50-year usufruct agreement. Financing comes from the Russian export Centre and the Russian Central Bank. The special zone will enjoy advantages regarding taxes and customs duties on exports and imports, labour costs and fees for passage from Suez Canal, with the possibility of transferring all of the revenues and profits without requiring an Egyptian partner (Abu Zaid, 2020). According to the Russian embassy to Egypt, trade between the two countries reached \$6.2 billion in 2019, making Russia one of the Egypt's top 10 trade partners. As reported previously, since the early 2000s Russian exports to Egypt increased significantly and in particular as regards wheat, minerals, oil, gas, cars, railroad cars, timber, fats and oils, while Egyptian exports to the Eurasian country include agricultural products, food and chemicals. In this regard, major Russian companies (including oil companies Rosneft and Lukoil, and automobile company Lada) operate in Egypt. Russia's Transmashholding (the largest manufacturer of locomotives and rail equipment), since 2019, has started supplying Egypt's railway sector with 1,300 railroad cars. In general, Russia's government is quite optimistic about a further improvement of the commercial relations amongst the two countries whereas the volume of investments in the field of oil and gas discovery, agro-food industries and mechanical engineering, are increasing significantly.

Thus, no country better represents the closer commercial and political connection between Moscow and MENA than Egypt, who is still the main purchaser of Moscow's grain accounting for around a quarter of Russian wheat exports. Numerous studies show that MENA's dependence on food imports will continue to grow and will reach about 63% of wheat supply by 2030 (Ahmed et al., 2017). Therefore, MENA will continue to import Russian grain, including wheat and processed products as well (Riabko, 2014; Sadler & Magnan, 2011).

Recently, Russia intensified its commercial relationship also with Saudi Arabia. The interaction between these two countries showed several ups and downs, which can be explained by the constantly changing role and place of each country in the world as well as in the Middle East region. An overview of the current relationship status among Russia and Saudi Arabia is provided in box number 6.

Box 6. Saudi Arabia and Russia and their recent cooperation in the agricultural sector

In February 2007 meetings with representatives of Saudi business community in Riyadh, President Putin noted that the two-way trade was at a very low level: (a) Russia accounted of just 0.2% of Saudi foreign trade at the start of 2016; (b) Russian export prevailed in the overall volume of bilateral trade, (c) Russian investments in the Saudi economy were insignificant, and Saudi Arabia did not invest in the Russian economy at all. So, in terms of economic and trade cooperation, since 2007 (after several meetings between President Putin and the Saudi business community in Riyadh), the two countries decided to enhance the level of economic partnership. The policy of economic transformation and the establishment of an investment economy, envisaged in 'Saudi Vision 2030', helped to bilateral cooperation. The priorities reported in the 'Saudi Vision' include: (a) creating a more effective defence industry; (b) developing the mining and processing sectors, as well as infrastructure and civil engineering; (c) improving the financial sector, tourism, culture and sports; (d) improving the sustainability of the environment, water and agriculture. Russia has developed a sufficient regulatory framework to be involved in the implementation of 'Saudi Vision 2030', considering that: (a) in November 1994 the General Agreement was concluded between the Government of the Russian Federation and the Kingdom of Saudi Arabia, and the agreement on the intergovernmental commission for trade, economic, scientific, and technical cooperation was signed; (b) during President Putin visit in Riyadh in 2007, agreements were signed on energy production and processing, transport infrastructure, agriculture, nuclear power engineering and metallurgy (Kosach and Melkumyan, 2016). Thus it is possible to state that, after 2007, a new era as regards the economic cooperation amongst the two countries begun. As regards the agricultural cooperation, Russia in the last ten years has been able to pay attention to the sections of the 'Saudi Vision' that pertain to the agro-environmental protection and food security. As reported several times, Russia owns critical resources (land and water mainly). Thus, Russian companies, since 2010, started to be involved in the export and production of farm products, making use of Saudi investments in Russia. The Kingdom, currently, imports grain (particularly wheat), cattle, sheep and goats, and dairy products. This enabled Saudi Arabia to save water resources. One example of this cooperation is SAHO-MENA, a joint venture established in 2012 by Siberian Agrarian Holding Group (Novosibirsk) and Saudi Najd Investments Ltd. (Dubai), which specialized in supplies of Russian grain. In view of this intense economic cooperation, in October 2019 a Russian delegation, led by President Putin and the Foreign Minister Lavrov arrived in Riyadh to sign a wide range of business agreements. The latter covered the fields of petroleum and other energy industries, space and satellite navigation, justice, health services, tourism, and agriculture. In this regard, the Russian Direct Investment Fund (RDIF) and the Saudi Agricultural and Livestock Investment Company signed an agreement to join forces in the search of investment projects in both Russian and Saudi Arabia agricultural sectors. Furthermore, during the same high-level meeting, the Minister of the Russian Federation and his homologue signed a memorandum of understanding (MoU) on mutual increase of agricultural exports. As a result, the Russian Federation started to increase exports of all key agricultural products, such as grain (and in particular wheat), meats, feedstuffs and processed food. Until 2019, Saudi Arabia was only buying barley in Russia. In August 2020, the Saudi Grains Organizations (SAGO) started also to purchase wheat from Moscow. One of the main causes preventing export of Russian wheat to the Saudi market. One of the main causes preventing export of Russian wheat to the Saudi market was a requirement to complete the absence of grain damaged by corn-bug in supplied wheat lots. In April 2019, Russian specialists visited Saudi Arabia to check the quality of the domestic wheat, with specimens supplied as early as at the turn of 2018 and having different degree of grain damages. Finally, on April 9th 2020 a symbolic cargo of Russian wheat was set sail for Saudi Arabia from a Black Sea port. The first cargo, as confirmed by Russia's agriculture safety watchdog, *Rosselkhoznadzor*, was of 60,000 tons. In this regard, Russia, looking to strengthen its position as a supplier to the Saudi Arabian market, sent a second shipment of wheat to the Gulf kingdom on May 14. As underlined several times by the Russian Minister of Agriculture Dmitry Patrushev, Russian companies are

interested not only in increasing the volume of trade in traditional types of products but are also ready to expand the product line. In this regard Russia's officials and agro-food entrepreneurs see also the following commodities/goods as great opportunities: (a) poultry; beef and mutton; (b) dairy and flour products; (c) confectionery. Several commercial agreements and memorandum regarding the mutual expansion of export of agricultural products have been signed, in particular on the occasion of the business forum "Partnership for Sustainable Development of Agriculture and Food Security" held in Riyadh on October 14, 2019.

As regards Iran, the Islamic Republic is currently Russia's third main wheat export market and Russia is Iran's main source of wheat imports as well. Iran typically produces enough grain to supply its domestic market, but the grain processing sector depends heavily on imported raw materials²². So, Iran is still one of the world's largest importers of grain (for example the Islamic Republic is the world's third largest importer of barley after Saudi Arabia and China), and Russia still supplies a quarter of Iran's imported raw materials. In February 2019, Iran signed a memorandum of understanding (MoU) with Russia and Kazakhstan for cooperation in wheat trading. The document, which was signed in Moscow, brought the countries closer to the free trade zone between Iran and the Eurasian Economic Union, which Russia has established with its neighbors. Under the deal, Iran started to import wheat for its private millers who produce flour for export. The agreement was particularly important for Iran because it opened the gates to a big market for the Islamic Republic, alongside the opening of the Iranian market to Russia and the northern countries.

Other countries within the MENA region rely on Russian wheat. During the period 2017-2020, Russia's foreign trade volumes to other nations such as Syria, Sudan, Kuwait and Tunisia rose twofold, and trade with Saudi Arabia increased three times. The quantity of Russian food products sold to the United Arab Emirates soared by 150%; 80% of these supplies are accounted for by grain. In this regard, it is important to analyze also the increasingly commercial relationships between Syria and Russia in the agro-food sector. Indeed, the agricultural sector in Syria before the beginning of the disruptive civil war contributed 19% of the national GDP. FAO estimated that losses in the Syrian agricultural sector have amounted to more than \$16 billion dollars since the beginning of the civil war in 2011. There have been significant losses in harvests of the sector's strategic crops such as wheat, which declined by 70 % over the last eight years, as well as cotton and animal feed. There is a significant strategic importance of the agricultural sector potential to re-invigorate the trade between Syria and its neighbors. Previously, Syria exported citrus, vegetables and livestock to Lebanon, Jordan, Saudi Arabia, Bahrain, and Qatar. In this regard, Russia positioned itself to control strategic fields in Syria, taking an advantage of the decline of the Syrian wheat production and becoming the leading supplier of wheat to the country. The quantities of annual Russian wheat supply to Syria have increased steadily, going from 650,000 tons in 2015 to 1.2 million tons in 2017, and 1.5 million tons in 2018 (Makieh, 2018). In 2019 and 2020 the quantities of wheat exported from Moscow to Damascus were almost the same as in 2018. Since 2015, Syria and Russia have increased the cooperation in the agricultural sector. This included the signing of agreements licensing the export of vegetable oil and fertilizers, as well as agreements to rehabilitate,

²²Iran's officials noted that although the Islamic Republic has enough wheat to cover its needs it could export Russian and Kazakh grain to other countries. Indeed, Iranian private millers until signing the MoU were not allowed to use domestic wheat for flour exports.

build and manage flour mills, grain silos, and water treatment facilities (Makiek, 2018). Furthermore, Moscow has already signed with the Syrian government a 49 years contract, which foresees the implementation of a significant expansion of the port as well as modernization of the current infrastructure. In the same area, both countries are establishing a Russian wheat exports center for the other countries in the MENA region. Also Saudi Arabia has announced plans to become a major hub for Russian agricultural products in the Middle East.

However, the above-mentioned Russia's export tax on wheat has blunted the automatic price lead of Russian wheat. In relation to that, according to S&P Global Plats (2021), France is back in the "picture", if one considers that GASC on February received a lowest offer of \$293.75/MT for 60,000 tonnes of French wheat in an international purchase tender. GASC is seeking an unspecified quantity of wheat for shipment March 15-30, tapping the international market for grain for the first time since key exporter Russia introduced an export tax of \$60.18/MT of wheat to go into effect from the start of March (Hellenic Shipping, 2021). This event is particularly significant because, as already noted, the agency typically buys majority of its wheat from Russia. With Russian wheat unlikely to be competitive, opportunities are expected to emerge for other exporters to compete for the market, according to analysts. Melikian (2021) recently lowered her estimates for the country's 2020-21 wheat exports by 1 million MT to 37.5 million MT, citing the impact of the export duty.

The importance of logistic for the Russian grain industry development and the MENA markets

The world's largest country inevitably needs an extensive transport and logistics network. Stretching across 17.1 million square km, larger than the surface area of Pluto, Russia is truly vast (Kingwell et al., 2017). To service its 140 million inhabitants with up-to-the-minute goods and services, air, sea, road and rail logistics are in high demand. As mentioned previously, Russia's continent-straddling size is both a blessing and a curse. Indeed, despite the existing transport links, Russia ranks 99 out of 160 countries in terms of logistics performance. In 2018, the World Bank's Logistics Performance Index ranks Russia far lower than other comparable economies such as Germany (1st) and the United Kingdom (6th)²³. However, current low logistics performance does not close off investment avenues. Rather, it points towards some golden opportunities. Russia needs modern technologies, methodologies and attitudes when it comes to transport. In section 2, some aspects regarding the Black Sea's ports strategic relevance have been outlined. This is to say that, notwithstanding a relevant infrastructural gap with the most industrialised countries, the Eurasian country is an intermodal hotspot with a significant room for expansion. With over 86,000 kilometres in rail track (Figure 18), a road network over 1.4 million kilometres long, plus countless air and seaports, Russia is a well-established intermodal network hub. Domestic suppliers vie with international companies to provide comprehensive services.

²³For further details about this index, please read the whole World Bank publication at the following website: <https://openknowledge.worldbank.org/bitstream/handle/10986/29971/LPI2018.pdf>

Figure 18- Main line rail network in Russia.



Source: Wikipedia

The Special Representative of the President of the Russian Federation on the Issues of Environment and Transport, Sergey Ivanov, estimated the market's potential at \$150 billion. Fresh warehousing stock is in demand as well as modernized cargo handling facilities at ports, new airports, rail hubs and logistics centres to match the government's ambitions. Foreign companies are well placed to aid the development of Russia's transport and logistics sector.

The analysis of Russia's transportation system displays that its overall conditions close to Black Sea ports are good enough. For example, all the major ports either in the Azov or Black Sea are well connected with the national railway and road system, which is good for Russia's grain industry ambitions to keep its key role in the MENA agricultural markets.

From the logistics point of view, there are several positive aspects of the Russian grain sector and its commercial relationships with the MENA region countries: (a) the grain agricultural area and production is close to the two biggest wheat importers: Egypt and Turkey (Figure 2); (b) the majority of the total wheat production comes from regions close to several Black Sea ports; (c) Russian ports are a mixture of deep-water ports, which can load vessels for distant markets, and shallow-water ports on the Sea of Azov loading smaller coasters to ship small parcels to closer markets in the Mediterranean (Wallack, 2018); (d) grain land freight costs in Russia are not too high as most grain is transported by trucks over short haul distances (Kingswell et al., 2017). Proximity to the MENA markets provides a significant advantage in shipping rates and time for the Russian grain. For example, the time to ship from Novorossiysk into Egypt is about 3.8 days compared with 25 days from Newcastle, Australia.

All governments, even the most powerful, must deal with specific issues characterizing each economic sector; from this point of view Russia's grain sector does not make an exception. For example, the Black sea is strategic for exporting large volumes of agricultural commodities in the MENA region, but the transportation of grain from the

Black Sea to Siberia and then to China, or to Vladivostok and then its placement on the Asian market requires too much time because of the distance (almost 5000km) and in general the quality of infrastructures. Thus, grain produced away from the Black Sea is therefore steeply discounted in view of the costs involved in transporting it to the port (Kingswell et al., 2017).

Thus, despite the presence of major ports such as Vladivostok, the Far-East area of Russia compared to the Black Sea Region shows significant lacks in terms of sophisticated transport services. In this regard, the government has already approved the so-called 'Long-term Strategy for the Development of the Grain Complex until 2035'. According to the document, the priorities for the development of the sector should be: (a) grain production increase and quality improvement; (b) scientific and technical support improvement; (c) infrastructure and logistics development. The implementation of the strategy will require additional investments in the industry in the amount of over 4.4 trillion roubles using private investment funds, bank lending, as well as targeted financing.

Focusing on the logistic issues, the plan (especially for the Far-East area) takes into account the expansion of the volume of port elevators and capacity of trans-shipment complexes, the carrying capacity of the port railway stations, access roads and highways, and the development of the route sending system.

It is expected that the total grain storage capacity will be increased from 156.9 million tons in 2018 to 167.4 million tons by 2035. The total investment in the development of infrastructure and transport and logistics support of the grain sector for 2019-2035 at 2018 prices will amount to 281.4 billion roubles. According to the results of the implementation of the proposed measures, the share of infrastructure costs in the cost of grain is expected to decrease significantly by 2035 (Russian Ministry of Agriculture, 2019).

As regards the governmental financial support, during the last two years the VTB (a state bank) has increased its investments in the grain export business; in fact, the bank loaded up on assets including port terminals, rail-freight operator and trader. According to Medetsky and Khrennikova (2019), those investments could be worth about 1.5 USD billion. The buying spree means that VTB handles a fifth of the Russian grain exports; in relation to that, the bank in March 2019 has agreed to buy the grain terminal of the country's busiest port: the terminal from the Novorossiysk port in southern Russia, which was majority-owned by state oil pipeline monopoly Transneft.

Through this deal the bank gained a significant control over the grain exports. In the same period VTB took over a 50% minus one share stake in the United Grain Company, a major grain trading company. The VTB (and government) strategy is clear: since Russia is a large agriculture products exporting country, the transport logistics in the grain industry is a strategic growing business in need of relevant financial support.

Russia's grain sector: strengths, weaknesses, opportunities, and potential threats

In the previous sections were outlined several positive aspects of Russia's grain and agricultural sector, above all the availability of huge agricultural areas suitable to cultivate several types of crops and in particular grain. In this section will be analyzed more factors, which can be double-edged, that is both strength and a weakness of the Russian agro-food setting, in relation also to the commercial relationships between the Eurasian country and the MENA region.

As regards the double-edged factors, hereinafter the most relevant are outlined:

1. Agro-holdings. This type of agricultural enterprises was established in the early 2000s. As mentioned previously, they are vertically-integrated enterprises combining different production stages, such as: (a) primary agriculture; (b) processing; (c) distribution; (d) and sometimes retail sale. As regards the pros and cons of agro-holdings, during these years there has been a wide debate amongst economists and sociologists. As concerns the cons, Liefert and Liefert (2012) pointed out that these agro-holdings, being the result of a process by which financial and/or energy companies diversify their investments' portfolio, are the result of: (a) the acquisition of a number of existing farms; (b) the improvement of farms' efficiency by cutting waste and other costs; (c) the transformation of these agro-farms into more profit-oriented and efficient producers. The agro-holdings' top administration brings investment, superior technology, and better management practices into the entire agro-food system. Thus, agro-holdings' managers very often introduce relevant agro-technical tools (for making farm's activity more efficient) such as: (a) higher quality seeds; (b) agricultural machineries; (c) and animal breeding stock. Although the data are not firm, the agro-holdings currently control between 15-20% of the Russian arable land. Vertically-integrated enterprises resembling agro-holdings also appear to have been the driving force in the 2000s behind the emergence of large, modern meat-producing enterprises, especially in the poultry and pork industries (FAO 2009). The agro-holdings magnitude and vertical integration can be seen as a protective response to the deficient infrastructure (physical, commercial, and institutional), high transaction costs, market concentration, and other forms of organized power that trouble Russian agriculture (Liefert and Liefert, 2012). A study carried out by Schierhorn et al. (2014) showed that agro-holdings using state-of-the-art agricultural production techniques and equipment, enabled efficient production of high-quality grain. Furthermore, a range of governmental programs, including subsidies on inputs and internet rates, support grain production in Russia. An increased upgrade of and additional investment in grain storage and port infrastructure in the country will accommodate larger crops. As regards the cons Visser (2017) indicated that empirical evidences showed also that the agro-holdings approach (in the mid-long term period) can bring many problems within the rural socio-economic context of nations like Russia, and in particular: (a) land appropriation (b) growing rural inequality (b) unemployment (though it depends very much on the type of agro-holding); (c) negative environmental effects (such as soil degradation). At the same time, there is a range of problems that large-scale farms face. These problems include but are not limited to large financial debts, financial volatility, and difficulties in finding sufficiently qualified employees.

2. Geography. Previously, it has been mentioned that Russia's total arable area as well as its location are close to the intersection of Europe, Asia, and in particular MENA region, which creates an advantage. The magnitude and potentialities of the Russian agricultural sector is summarized by the following numbers: Russia has 122m ha of arable land, which account for around 10 per cent of the total global. Indeed, much of it remained abandoned after the collapse of the Soviet Union. Due to the large land area, the Eurasian country's farmers can grow, for example, spring and winter wheat and a range of other crop types. Of course, this portfolio of crops can provide biological and industrial resilience for the Russian grain sector and in particular the wheat industry. It has been already mentioned that Russia's strategic position brings some powerful competitive strengths at the table, especially as regards its significant grain export capability from the Black Sea ports towards MENA region at significant lower freight cost compared to the competing grain from Canada, USA and Australia. However, the Eurasian country's vast size at the same time affects its commercial activity. For example, Russia can potentially supply grain to

China (and certain eastern European neighbors) without the need for ocean freight. As indicated in the previous paragraphs, grain can be exported theoretically from the Vladivostok port to the large and lucrative Chinese, Korean and Japanese markets. However, at the moment Vladivostok's potential use remains dormant probably due to Russia's grain production centers locations, all of which are positioned thousands of kilometers away from Vladivostok. Therefore, the cost of rail freight makes Vladivostok's grain export mostly uncompetitive. Even if grain production moves eastwards, the costs of land development and provision of required infrastructure and services are potentially wasteful investments, especially given the likelihood of low grain prices over the next handful of years. So Russia's competitors (mainly Australia) should not fear a possible connection of Vladivostok to key Far East markets because the grain transport costs for such an enormous distance are impractically high (Kingwell et al, 2017).

3. Geopolitics. It can be considered a "double-edged sword", in particular the military power of Russia and its effectiveness in serving the country's national interests. For example, Russia's army efficiency has allowed the Eurasian country to assert its control of Crimea, which was part of Ukraine under international law. The Crimea's conquest undoubtedly represented a winning move for the further development of Russia's agricultural power. The Eurasian country now exerts a direct control over the grain production in Crimea and has unimpeded use of its ports. Furthermore, this move has allowed Russia to disrupt the grain production in eastern Ukraine, noting that Ukrainian grain exports directly compete against Russian grain exports (Kingswell et al., 2017). With the military diplomatic support provided to Syria's government, which relies strategically on hard power and tough diplomacy, Russian grain exports are increasingly flowing to Syria. In addition, closer trade ties with Iran are being formed as the Shi'a religious base in Iran opposes the Sunni-based forces active in neighboring Syria. However, border incidents between Russia and Turkey had been an unanticipated consequence of the support provided to Assad's regime, which has jeopardized Russia's trade with Turkey (Kingswell et al., 2017). The militaristic stance of Russia brought also some substantial adverse ramifications, such as: (a) the Russian occupation of Crimea and its subsequent involvement in the Eastern Ukraine conflict have forced several Western nations to impose economically harmful sanctions against Russia; (b) Russia decision to ban agricultural imports from the countries that pushed it towards cost inflation and decline in living standards; (c) Western nations' support for Ukraine, which includes funding to improve Ukraine's grain sector cost-efficiency, thereby adding to competitive pressures on Russian grain exports.

In recent years Russia's agro-food and grain sectors are strengthened by many advantages empowering the country's position as a wheat exporter:

1. Closeness of agricultural areas to strategic grain importing countries. As mentioned, Russian wheat production is close to Egypt and Turkey that are two of the world largest wheat importing markets. A large production of Russia's wheat comes from regions adjacent to several Black Sea ports. In this context, grain land freight costs in Russia are not too high as most grain is transported by trucks over short haul distances.

2. Characteristics of Russian ports. In the section focused on logistics, it has been described that Russian ports are a mixture of deep-water ports (loading huge-size vessels for distant markets) and shallow-water ports on the Sea of Azov (loading smaller coasters to ship small parcels by affordable prices to closer markets in the Mediterranean). In addition, these shallow-water ports allow buyers to target quality wheat in smaller parcels. Another reason for Russia's increasing supremacy in the grain sector is that

compared to the EU, US, Canada and Australia, the Eurasian country has relatively low agricultural land values and low cost of grain production.

3. Wheat qualitative characteristics. From the agronomic point of view, it is possible to state that the medium-protein hard wheat produced in Russia is ideally suited to Middle-Eastern flat breads, which is well combined with the country's proximity to these markets.

4. Rouble weakness. Within this frame of reference, it must be mentioned that the rouble weakness ensures free on board (FOB) grain prices, which makes grain production relatively profitable in Russia. The sharp devaluation of rouble started since the financial crisis in 2014-2015; indeed, a decline in confidence in the Russian economy caused investors to sell off their Russian assets, which led to a decline in the value of the Russian rouble and sparked fears of a potential Russian financial crisis. Notwithstanding some slight appreciation of the rouble during the 2019-2020 season, Russia was again the world leader as regards grain exports. Indeed, in crop year 2019-2020, Russia exported almost 42 MT of cereals. This was approximately three million metric tons lower than the volume of Russia's cereal exports recorded in the previous years. The 2019-20 export total includes 34.2 MT of wheat, 5.1 million tonnes of barley and 3.9 million tonnes of corn, according to SovEcon.

Despite the several strength points, Russia's agro-food system and in particular its grain industry are also characterized by some weaknesses, which can be summarized as follows:

1. The Black Sea factor. As mentioned, the Black Sea is Russia's only viable route for exporting significant volumes of grains. In this regard, figure 21 clearly indicates that any effort to export wheat produced in Siberia means a 4800km journey west to the Black Sea or the same distance east to Vladivostok. Grain produced away from the Black Sea is therefore steeply discounted in view of the costs involved in bringing it to port (Kingwell et al., 2017).

2. Low suitability for Western countries milling sector. Russian wheat has a relatively poor reputation for producing Western-style breads and Asian noodles, so there is little chance of displacing US, Canadian, and Australian in premium Asian markets.

3. Low supply stability. Considering that Russia will always prioritize affordable food availability for its citizens, stability of supply cannot be used as a selling point. Under certain conditions countries with delicately balanced food security can be reticent to rely on the unstable Russian supply to fulfill their wheat importation requirements.

4. Inappropriateness of the Russian grain sector for the development of medium/small agriculture enterprises' business. Many small-to-medium-sized farms in Russia are forced to sell off their grain. Inadequate and inferior on-farm grain storage, price inflation and inability to access price risk management tools force many farmers to sell at or near harvest.

In relation to the potential opportunities, we have to consider:

1. Infrastructures' improvement. Russia needs gradual improvements in logistics infrastructure to achieve economic viability for the grain production located in the agricultural areas at greater distance from the nearest export terminal. This potential could be used if massive tracts of agricultural land for grain production are eventually unlocked (Saraykin et. al., 2014).

2. The potential of Siberia's proximity to China. The border shared with China should increasingly create opportunities for cross-border trade out of Siberia and other parts of the country without close access to ports.

3. Climate change benefits. Projected climate change may create large swathes of newly arable land in Russia (Kiselev et al., 2013).

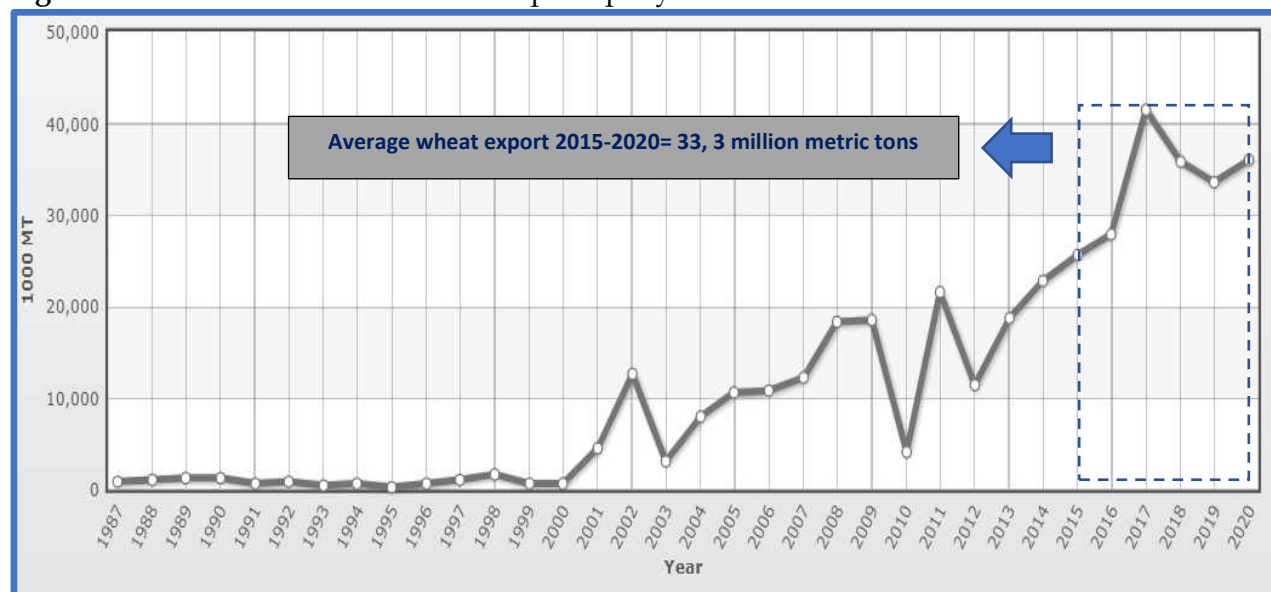
4. Improvement of public scientific research institutions' efficiency. Government's decision and actions to restructure the public scientific research institutions in Russia are likely to improve the efficiency and outcomes of research in Russia. Grain production will ultimately benefit from improvements in the organisation of agricultural science in Russia. For example, better-quality varieties with improved yields are likely to further strengthen the grain production.

Conclusion

Since the early 2000s the Russian agro-food sector and in particular its wheat production have increased greatly. Indeed quantitative data undeniably show that currently Russia is one of the world's top-ranked exporters of a strategic commodity such as wheat: a significant step-forward if one would think about the country's overwhelming economic conditions after the collapse of the Berlin wall and the end of the communist regime. The renaissance of the Russian agro-food sector is a result of a range of factors:

1. Russia has sizeable areas of fertile, arable land and nearby wheat markets in Egypt, Turkey, Iran and other MENA countries. In this regard, as pointed out in this study, Russia's main southern wheat-producing region has ready access to nearby ports ensuring that their supply chain costs are far lower than those in USA, Canada or some inland parts of Australia (Kingwell et al., 2017). In the previous sections, it has been accounted for that the geographical proximity of Russia's agricultural area to the MENA region is not the only reason for the positive results of the country's agricultural export. In the last ten years Russia has claimed this position by making well-focused strategic-geopolitical choices: (a) the Crimea' annexation, which allowed the country to consolidate its dominance in the Black Sea "region" referring also to the agricultural trade activities extension in the MENA countries thanks to the strategic position of the Sevastopol port; (b) the military intervention in Syria in September 2015, which must be interpreted as a vast strategy of Moscow to control (economically, military and politically) all the Middle East (or MENA region).
2. During the last ten years, Russian companies' capacity to export agro-food commodities and in particular wheat in several MENA countries confirms Moscow's leading role in the agro-food sector, especially its ability trade with the Middle East area. This trend is supported by several factors, which could be listed as follows:
 - **Russian superpower.** Russian wheat production and other crop productions witnessed significant growth in the past ten years. The government's decision to impose food import ban on the Western countries in the wake of the economic sanctions forced on the Eurasian country after the annexation of Crimea, played an important role; indeed, this ban encouraged farmers to increase the domestic production. Furthermore, together with the previous production surges, Russia was able to increase significantly its wheat export capabilities in the last period. In the period 2015-2020, Russia exported 33 million metric tons of wheat on average (Figure 19) according to USDA (2020).

Figure 19 - Russian Federation wheat exports per year



Source: USDA and Index Mundi, 2020

3. Regional shift. Local wheat production in several MENA countries is still unable to meet the domestic demand forcing these countries to rely on wheat suppliers around the world to bridge the gap between domestic production and consumption. Russia has sizeable areas of fertile, arable land and large nearby markets in all MENA countries and especially in Egypt and Turkey. In this regard, it has been pointed out that Russia's main southern grain-producing regions have ready access to nearby ports ensuring that their supply chain costs are lower than those in Canada, USA or some inland parts of eastern Australia. This makes the Russian wheat prices more attractive to buyers from the region considering that, for example, the cost of its export without shipping is USD 100 per ton (according to some estimates) compared with about USD 146 for Australian wheat.

4. Economic presence. As stated previously, Russia's intervention in Syria helped the Eurasian country to play a greater military and political role in the MENA region, and thereby to enhance its economic presence in the region. It means that in several MENA countries Moscow's economic presence has been evident through the direct involvement of companies operating in the energy, agriculture and logistic sector. During these years, Russia appeared to the majority of the Middle East countries as a reliable partner able to support the government offering a political and economic partnership. This is the case with Syria, where Moscow increased step-by-step its own geo-economic interests. For example, in September 2017 the Syrian government signed a three-year agreement for purchase of 3 million metric tons of Russian wheat in order to cover possible risks that might affect wheat supplies. It is a move that boosts the Russian economic interests on the Syrian market. Furthermore, Russia is currently trying to expand its presence especially in the grain sector of other countries that have a strong commercial connection with Ukraine, France and USA. This is the case of Morocco and Saudi Arabia, where Russian grain companies supported by the government signed commercial agreements to supply wheat to both countries.

Of course, Russia's geo-economic expansion in the MENA region meets potential obstacles, which may hinder Moscow's wheat supplies to the Middle East in the future. Among these the most relevant are:

1. The instability of political relations between Russia and some countries in the region.

An example of such instable political relations is the tension between Russia and Turkey in late 2015, which impeded wheat trade between both countries for several months. Besides, there are other several trends which suggest temporary economic interests between Russia and some countries in the region. In this regard, the economic and political relationship between Russia and Iran represents a classic example of temporary interest. Collaboration between Teheran and Moscow in the political, economic, and military arenas has increased substantially in recent years. In the economic field, Russia is trying to help Iran after the USA enforced embargoes against it and has been praised by Iran for its assistance. However, by doing so the Russians are also securing their own economic interests in the Middle East in several sectors (including the agro-food sector). In fact, despite areas of collaboration, Iran is well aware that Russia is not driven by a desire to see an overly strong and independent Iran. The Iranian political establishment agrees on the fact that the country will not have a fully support of Russia in the event of a war with the USA. Indeed, as reported by several Iranian analysts, Russia would be primarily interested in securing its own interests²⁴. Perhaps partly because of Iran's fears that Russia will not remain committed to their alliance, Teheran is increasing its cooperation with China in a way to definitely unsettle Russia and gain an advantage in their future discussions and negotiations²⁵.

2. The fluctuation of Russia's domestic policies. The government continues to monopolize some value chain segments (such as transportation) and intervenes in the sector to support national interests (Ahmed et al., 2017). Policy interventions can discourage foreign investments and affect trade's efficiency. Thus, as Russia increases its share on the wheat market, it must improve the policy environment and implement policies capable to make the wheat sector and in general the agro-food sector even more competitive at international level. For example, since transportation policies are considered strategic for the opening of new remunerative markets for Russian agro-food companies, it is necessary to tackle the inadequate transport infrastructure issue; the latter is preventing the country from capitalizing on economic opportunities, particularly with Asian partners such as China, Japan and South Korea. Without sustained and systematic improvements of the region's transport networks, and particularly railways, bridges and ports, the Kremlin will be unable to attract the foreign investment needed to boost freight capacity and support export growth. Despite the announced modernization of infrastructures (see box 1), currently the implementation of the public projects and the public budget spending modalities are not yet completely clear. During the last ten years, the country implemented trade policies to protect domestic wheat supplies and to tackle internal food inflation: (a) after a severe drought (in 2010) that devastated the region's wheat harvest, Russia banned all wheat exports for 6 months; (b) as a result of the Crimea

²⁴In an article published on the reformist news website *Entekhab*, based on reports from the Russian media, it was stated that in the case of a war between Iran and the U.S., Russia will not only occupy Georgia to stop the U.S. from establishing military bases in the area, but will also occupy the other countries in the Caucasus. The conservative *Baztab* news website, which has close links to Mohsen Rezaei, a former senior commander of the Islamic Revolutionary Guard Corps, also citing Russian media, wrote that even though the Russians have no desire to get involved in a war between Iran and the U.S., they will ultimately side with Iran.

²⁵For Iran, however, a triangular alliance with Russia and China would be the ultimate victory against U.S. alliances in the region. In regard to the recent joint Iranian-Russian-Chinese naval drill, the Iranian hard-line newspaper *Kayhan* wrote, "The alliance of Iran, China, and Russia is the formation of a 'new maritime power triangle' and a display of power to Americans and their European and regional allies."

crisis and consequent international sanctions that caused a surge in domestic food prices and the devaluation of the rouble. In relation to the latter issue, Russia has imposed a high tax on wheat exports essentially ending all shipments. These trade disruptions have significant implications for importing countries that are reliant on Russian wheat and often push these nations to purchase more expensive wheat from alternative partners (Ahmed et al., 2017). In addition, the Russian wheat quality may not be sufficient to attract some buyers from the MENA region. That happened recently between Russia and Egypt (with GASC excluding Russia from its tender process because Moscow could not guarantee stable quantities of the agricultural commodity) as well as with Iran that, as aforementioned, in 2016 suspended wheat import from Russia and then in 2019 signed a new memorandum of understanding with Moscow and Kazakhstan for cooperation in wheat trading.

Trade relation with Russia and wheat exports contribute to food security around the world, especially import-dependent regions like MENA. In the last decade, countries belonging to this area have increased their reliance on Russian wheat imports and are therefore vulnerable to price and supply fluctuations that occur in the country. MENA's import dependence on food products will continue to increase the region's vulnerability to global food price shocks (Wright & Cafiero, 2010).

Wheat price will remain the main determinant in wheat purchases for a region experiencing modest regional macroeconomic outlook and reduced oil revenues, as well as fiscal deficits and high public debt. The inflationary impact on vulnerable populations could potentially spark unrests in a region that remains unstable, with persisting conflicts in Iraq, Syria, Libya and Yemen (Devarajan & Mottaghi, 2015; World-Bank, 2012). Therefore, in the next decades it is important that Russia continues to deliver as much as possible steady quantities of wheat to these countries with qualitative characteristics compliant to the requests of the local milling industry. In this regard, the reform²⁶ of the wheat breeding sector implemented by Putin in 2013 to spread the use of registered and certified wheat varieties (about 20% of registered varieties are harvested on 80% of the wheat area and varieties have long cycles of use, 13–15 years) is starting to give some results (Kingwell et al., 2017).

As pointed out several times during this study, Russia and its Black Sea neighbors such as Ukraine form the most important wheat-exporting region in the globe, being responsible for about 30% of the global wheat exports. Thus, any changes in the wheat production in Russia, and more in general in the Black Sea region, due to climate, technology, politics or policy, have the capacity to greatly influence the international wheat trade (Kingwell et al., 2017).

²⁶After the collapse of the Soviet Union, the Russian Academy of Agricultural Sciences (RAAS), which today is responsible for Russia's plant breeding program. The RAAS belongs to the Russian Academy of Sciences (RAS). The Ministry of Education provides a steady stream of trained scientists, including plant breeders and geneticists. However, this model operates under significant operational and financial constraints. A restrictive budget limits their ability to hire enough graduates and post-graduates to provide the functions critical to any plant-breeding program. Russian wheat breeding has therefore lacked the resources for critical functions, such as the technical extension activities necessary for facilitating adoption of new varieties. In 2013 President Putin lost established changes causing the RAS to report to a newly formed federal department, which in turn reported directly to him. This new oversight arm of government ensured the Academy's US\$1.9bn annual budget was directed in areas of maximum benefit. It is too early to draw any conclusions regarding the implications of these changes for wheat breeding, which is only one small part of a huge process of institutional change.

Thus, although Russian wheat supplies constitute an important figure in Moscow's exports to the Middle East countries, there are major variables, which may impact their level in the forthcoming years. These variables are not confined only to the fluctuation of political relations between Russia and some countries in the region but are extended also to the internal socio-economic and political transformation in Moscow.

This shall be of particular importance if the Eurasian country wishes to maintain its key role in the MENA region. The government needs to implement as soon as possible the list of national projects (see box 1) having in mind that the expenditure in most areas is behind schedule. To a large extent, the 85 Russian "federal subjects" (regions) shall be responsible for the implementation; however, many of the latter are struggling to meet their share of the financing, and a majority of them are sceptical regarding the feasibility of the projects. Doubts have been expressed also on the economic viability of mega-projects such as the high-speed Moscow-Kazan railway, or a proposed 10-kilometre bridge linking the far eastern island of Sakhalin to the mainland (Russel, 2019).

Aside from state-led investments through national projects, Russia is having trouble to attract the foreign and domestic investment needed for the modernization of the economy. Western economic sanctions are a major deterrent that weighs heavily on entrepreneurs, but of equal importance are problems linked to rule of law. In February 2019, US businessman Michael Calvey was detained on possibly dubious fraud charges; his arrest, described by Alexey Kudrin as an 'economic disaster', is a warning to foreign investors of the risks of operating on Russian markets. A survey led in May 2019 by Russian legal experts describes similarly negative conditions, with 69 % of respondents considering the country's business environment to be insecure (a higher percentage than in previous years). In absence of deeper structural reforms and with the ongoing pandemic crisis, Russia's long-term growth potential was estimated at 1.8 % by several think-tanks (far shorter than the Russian Economic Development Ministry's forecast of 3.3 % by 2023), let alone the 7% annual average needed to meet Putin's target of a 50 % increase in GDP (Russel, 2019).

Thus, lagging behind its main competitors, there is a long-term risk for Moscow to lose the resources battle against its competitors and fail to establish the needed influence or build up its armed forces, hindering its aspirations to act as a global superpower also in the agricultural sector.

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